

=> d que stat 11  
L1 1 SEA FILE=HCAPLUS ABB=ON PLU=ON US2007-599651/APPS

=> d ibib ed abs ind 11  
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS' - CONTINUE? (Y)/N:y

L1 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 2005:1130679 HCAPLUS Full-text  
DOCUMENT NUMBER: 143:406961  
TITLE: Modified conjugated diene polymers having low heat buildup property, polymerization initiators therefor, their manufacture and rubber compositions  
INVENTOR(S): Suzuki, Eiju; Ozawa, Yoichi  
PATENT ASSIGNEE(S): Bridgestone Corporation, Japan  
SOURCE: PCT Int. Appl., 44 pp.  
CODEN: PIXXD2  
DOCUMENT TYPE: Patent  
LANGUAGE: Japanese  
FAMILY ACC. NUM. COUNT: 1  
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097845	A1	20051020	WO 2005-JP4810	20050317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1734060	A1	20061220	EP 2005-720997	20050317
R: DE, FR, IT				
CN 1961011	A	20070509	CN 2005-80017367	20050317
BR 2005009641	A	20070918	BR 2005-9641	20050317
US 20080033110	A1	20080207	US 2007-599651	20070713 <--
PRIORITY APPLN. INFO.:			JP 2004-111231	A 20040405
			WO 2005-JP4810	W 20050317

OTHER SOURCE(S): MARPAT 143:406961

ED Entered STN: 21 Oct 2005

AB Title conjugated diene (CD) homopolymers or the CD-aromatic vinyl compound (AV) copolymers are characterized as R1Y1NQR2(Poly)Z1 [R1, R2 = C1-20 alkyl, aryl, (substituted) silyl, or H; Q = active H-free and heterocyclic atom-containing C1-12 alkylene or arylene; Y1 = (substituted) silyl or H with part of R2, Q, and Y capable to form ring; Poly = the CD homopolymer or CD-AV copolymer component; Z1 = alkali or alkaline earth metal or residue from reaction with reactive carbanion compound or H]. Polymerizing butadiene and styrene in cyclohexane solution in the presence of an initiator from dimethyl-1,6-hexanediamine, BuLi, and Me3SiCl at 50° for 2.5 h and adding BHT gave a polymer showing number-average mol. weight 1.74 + 105, polydispersity 1.20, and 100° Mooney viscosity 22, 80 parts of which was kneaded with natural

rubber 20, carbon black 50, and S 1.5 parts and vulcanized at 160° for 15 min to form a vulcanizate with tan $\delta$  index 69 under 15 Hz, 50° and 3% strain; vs., 87, for a vulcanizate prepared similarly from a SBR prepared in presence of hexamethylene diamine, ditetrahydrofurylpropane, and BuLi.

IC ICM C08F036-04  
 ICS C08F004-06; C08F008-00; C08L015-00

CC 39-4 (Synthetic Elastomers and Natural Rubber)

ST org alkali metal diamine silane reaction product polymn initiator; alk earth compd diamine silane reaction product polymn initiator; conjugated diene polymn initiator silyldiamine reaction product butyl lithium; low heat buildup conjugated diene rubber polymn initiator

IT Organometallic compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkali metal compds., polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal  
 reaction products for vulcanizates with low heat buildup)

IT Amines, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (diamines, polymerization initiator from; manufacture of conjugated diene polymers  
 in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizates with low heat buildup)

IT Polymerization catalysts  
 (manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizates with low heat buildup)

IT Styrene-butadiene rubber, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizates with low heat buildup)

IT Amides, uses  
 Heterocyclic compounds  
 Isocyanates  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (modifier; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizates with low heat buildup)

IT Alkali metal compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (organometallic compds., polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal  
 reaction products for vulcanizates with low heat buildup)

IT Alkaline earth compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (organometallic, polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizates with low heat buildup)

IT Silanes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization initiator from; manufacture of conjugated diene polymers in

presence of diamine/silane/organic alkali or alkaline metal reaction products

for vulcanizates with low heat buildup)

IT 68-12-2, DMF, uses 80-73-9, 1,3-Dimethyl-2-imidazolidinone 90-93-7,  
 4,4'Bis(diethylamino)benzophenone 90-94-8,  
 4,4'Bis(dimethylamino)benzophenone 100-10-7, 4-Dimethylaminobenzaldehyde  
 100-43-6, 4-Vinylpyridine 100-69-6, 2-Vinylpyridine 101-68-8  
 103-71-9, Phenylisocyanate, uses 103-72-0, Phenylthioisocyanate  
 105-60-2,  $\epsilon$ -Caprolactam, uses 120-21-8,  
 4-Diethylaminobenzaldehyde 127-19-5, Dimethylacetamide 530-44-9,  
 4-Dimethylaminobenzophenone 538-75-0 617-84-5, N,N-Diethylformamide  
 685-91-6 872-50-4, N-Methylpyrrolidone, uses 889-37-2,  
 4-Dimethylaminobenzylideneaniline 1453-82-3, 4-Amidopyridine  
 2556-73-2, N-Methyl- $\epsilon$ -caprolactam 4637-24-5,  
 1,1-Dimethoxytrimethylamine 6961-56-4,  
 1,1-Bis(4-diethylaminophenyl)ethylene 7478-69-5,  
 1,1-Bis(4-dimethylaminophenyl)ethylene 18127-87-2,  
 4-Diethylaminobenzophenone 34064-35-2

RL: MOA (Modifier or additive use); USES (Uses)

(modifier; manufacture of conjugated diene polymers in presence of  
 diamine/silane/organic alkali or alkaline metal reaction products for  
 vulcanizates with low heat buildup)

IT 7646-78-8, Tin tetrachloride, uses

RL: MOA (Modifier or additive use); USES (Uses)

(modifying agent; manufacture of conjugated diene polymers in presence of  
 diamine/silane/organic alkali or alkaline metal reaction products for  
 vulcanizates with low heat buildup)

IT 75-77-4, Trimethylsilyl chloride, reactions 109-72-8, Butyllithium,  
 reactions 13093-04-4, N,N'-Dimethyl-1,6-diaminohexane

RL: RCT (Reactant); RACT (Reactant or reagent)

(polymerization initiator from; manufacture of conjugated diene polymers in  
 presence of diamine/silane/organic alkali or alkaline metal reaction

products

for vulcanizates with low heat buildup)

IT 9003-55-8P

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP  
 (Properties); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)

(styrene-butadiene rubber; manufacture of conjugated diene polymers in  
 presence of diamine/silane/organic alkali or alkaline metal reaction

products

for vulcanizates with low heat buildup)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

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L2 1 SEA FILE=WPIX ABB=ON PLU=ON US2007-599651/APPS

=> d iall code 12

YOU HAVE REQUESTED DATA FROM FILE 'WPIX' - CONTINUE? (Y)/N:y

L2 ANSWER 1 OF 1 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN

ACCESSION NUMBER: 2005-810555 [82] WPIX

DOC. NO. CPI: C2005-249169 [82]

TITLE: Modified conjugated diene polymer for rubber composition,

is homopolymer of conjugated diene compound or copolymer of conjugated diene compound and aromatic vinyl compound, and has specific residue derived from diamine compound  
 DERWENT CLASS: A12  
 INVENTOR: OZAWA Y; SUZUKI E; OZAWA Y B C; SUZUKI E B C  
 PATENT ASSIGNEE: (BRID-C) BRIDGESTONE CORP; (OZAW-I) OZAWA Y; (SUZU-I)  
 SUZUKI E  
 COUNTRY COUNT: 107

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2005097845	A1	20051020	(200582)*	JA	44[0]	
EP 1734060	A1	20061220	(200702)	EN		
JP 2006511959	X	20080228	(200717)	JA	33	
CN 1961011	A	20070509	(200760)	ZH		
BR 2005009641	A	20070918	(200763)	PT		
US 20080033110	A1	20080207	(200812)	EN		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2005097845	A1	WO 2005-JP4810	20050317
BR 2005009641	A	BR 2005-9641	20050317
CN 1961011	A	CN 2005-80017367	20050317
EP 1734060	A1	EP 2005-720997	20050317
EP 1734060	A1	WO 2005-JP4810	20050317
BR 2005009641	A	WO 2005-JP4810	20050317
US 20080033110	A1	WO 2005-JP4810	20050317
US 20080033110	A1	US 2007-599651	20070713
JP 2006511959	X	WO 2005-JP4810	20050317
JP 2006511959	X	JP 2006-511959	20050317

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
EP 1734060	A1	Based on
BR 2005009641	A	WO 2005097845
JP 2006511959	X	Based on
		WO 2005097845
		A
		WO 2005097845
		A

PRIORITY APPLN. INFO: JP 2004-111231 20040405

## INT. PATENT CLASSIF.:

IPC ORIGINAL: C08F0036-00 [I,C]; C08F0036-00 [I,C]; C08F0036-00 [I,C];  
 C08F0036-04 [I,A]; C08F0036-04 [I,A]; C08F0004-00 [I,C];  
 C08F0004-00 [I,C]; C08F0004-06 [I,A]; C08F0004-06 [I,A];  
 C08F0008-00 [I,A]; C08F0008-00 [I,C]; C08F0008-00 [I,A];  
 C08F0008-00 [I,C]; C08K0003-00 [I,C]; C08K0003-04 [I,A];  
 C08K0003-36 [I,A]; C08L0015-00 [I,A]; C08L0015-00 [I,C];  
 C08L0015-00 [I,A]; C08L0015-00 [I,C]; C08L0009-00 [I,A];  
 C08L0009-00 [I,C]  
 IPC RECLASSIF.: C08C0019-00 [I,C]; C08C0019-44 [I,A]; C08F0036-00 [I,C];  
 C08F0036-04 [I,A]; C08F0004-00 [I,C]; C08F0004-06 [I,A];  
 C08F0004-08 [I,A]; C08F0004-10 [I,A]; C08F0008-00 [I,A];  
 C08F0008-00 [I,C]; C08L0015-00 [I,A]; C08L0015-00 [I,C]  
 ECLA: C08C0019-44; C08F0004-08D; C08F0004-10;  
 USCLASS NCLM: C08F0036-04+4/08D; C08F0036-04+4/10; C08L0015-00  
 525/185.000

NCLS: 525/331.900; 526/183.000; 526/279.000; 526/346.000;  
526/348.600

## BASIC ABSTRACT:

WO 2005097845 A1 UPAB: 20060125

NOVELTY - A modified conjugated diene polymer is homopolymer of conjugated diene compound or copolymer of conjugated diene compound and aromatic vinyl compound. The modified conjugated diene polymer has a residue (I) derived from diamine compound at the polymerization initiation end.

DETAILED DESCRIPTION - A modified conjugated diene polymer is homopolymer of conjugated diene compound or copolymer of conjugated diene compound and aromatic vinyl compound. The modified conjugated diene polymer has a residue (I) derived from diamine compound at the polymerization initiation end.

R1,R2=1-20C alkyl or aryl, substituted silyl, or H;

R3=1-12C alkylene or arylene, and optionally includes hetero atom;

Y1=substituted silyl or H, where R1-R3 and Y1 are optionally coupled together to form cyclic structure;

Poly=copolymer portion of aromatic vinyl compound and conjugated diene compound, or homopolymer portion of conjugated diene compound; and

Z1=alkali metal, alkaline-earth metal, H or residue formed by reacting alkali metal and alkaline-earth metal with carbanion reactive compound.

INDEPENDENT CLAIMS are included for the following: (i) polymerization initiator of formula (V); (ii) polymerization initiator solution; (iii) manufacture of polymerization initiator; (iv) manufacture of modified conjugated-diene group polymer; and (v) rubber composition containing modified conjugated diene as rubber component.

R1-R3=same as defined above;

Y2=substituted alkyl, where R1-R3 and Y2 optionally couples together to form cyclic structure; and

M1=alkali metal or alkaline-earth metal.

USE - For rubber composition used for belt and tread of tire for motor vehicle.

ADVANTAGE - The modified conjugated diene polymer has excellent interaction with filler and provides rubber composition having low heat generation property.

MANUAL CODE: CPI: A02-A07B; A04-B01A; A12-H01; A12-T01

AN 2005-810555 [82] WPIX

DC A12

IPCI C08F0036-00 [I,C]; C08F0036-00 [I,C]; C08F0036-00 [I,C]; C08F0036-04 [I,A]; C08F0036-04 [I,A]; C08F0004-00 [I,C]; C08F0004-00 [I,C]; C08F0004-06 [I,A]; C08F0004-06 [I,A]; C08F0008-00 [I,A]; C08F0008-00 [I,C]; C08F0008-00 [I,A]; C08F0008-00 [I,C]; C08K0003-00 [I,C]; C08K0003-04 [I,A]; C08K0003-36 [I,A]; C08L0015-00 [I,A]; C08L0015-00 [I,C]; C08L0015-00 [I,A]; C08L0015-00 [I,C]; C08L0009-00 [I,A]; C08L0009-00 [I,C]

IPCR C08C0019-00 [I,C]; C08C0019-44 [I,A]; C08F0036-00 [I,C]; C08F0036-04 [I,A]; C08F0004-00 [I,C]; C08F0004-06 [I,A]; C08F0004-08 [I,A]; C08F0004-10 [I,A]; C08F0008-00 [I,A]; C08F0008-00 [I,C]; C08L0015-00 [I,A]; C08L0015-00 [I,C]

EPC C08C0019-44; C08F0004-08D; C08F0004-10; C08F0036-04+4/08D; C08F0036-04+4/10; C08L0015-00

NCL NCLM 525/185.000

NCLS 525/331.900; 526/183.000; 526/279.000; 526/346.000; 526/348.600

IT UPIT 20060125

107016-DIS; 129411-DIS; 2211-DIS; 23-DIS; 368-DIS; 483-DIS

MC CPI: A02-A07B; A04-B01A; A12-H01; A12-T01

PLE UPA 20060125

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H0124-R; S9999 S1434; K9449; M9999 M2039; M9999 M2777; L9999 L2777; L9999 L2391; L9999 L2039; H0180; P0328; P1741; P0395; P0408;

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H0124-R; S9999 S1434; K9449; M9999 M2039; M9999 M2777; L9999 L2777; L9999 L2391; L9999 L2039; H0180; P0328; P1741; P0351; P0362;

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L9999 L2777; L9999 L2391; L9999 L2039; H0180; P0328;

[1.5] 2004 K9449; ND02; ND03; ND04; ND06; Q9999 Q9256-R Q9212; Q9999  
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B3372; B9999 B5505-R;

[1.6] 2004 Si 4A; H0157;

[1.7] 2004 D01 D11 D10 D18-R Si 4A F09 F07 D81 D82 D83 D84 D85 D86 D87  
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Si 4A F07-R D22-R; D01 D10-R D18-R F87 F86 D23 D22 D43 D42 D73  
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4A; D01 D11 D10 D13-R D18-R Si 4A Sn D68 D70 C1 7A I- D83 D84  
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[1.8] 2004 D01 D11 D10 D18-R Si 4A F09 F07 D22-R 2A-R 1A-R N- 5A; C999  
C293; C999 C102 C000; C999 C248;

[1.9] 2004 D00; D00 D09 C- 4A DCN: R05085 DCR: 2211; D00 F20 O- 6A Si  
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RN 9003-55-8 REGISTRY
ED Entered STN: 16 Nov 1984
CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)
OTHER CA INDEX NAMES:
CN 1,3-Butadiene, polymer with ethenylbenzene (9CI)
CN 1,3-Butadiene, polymer with styrene (8CI)
OTHER NAMES:
CN 1,3-Butadiene-styrene copolymer
CN 1,3-Butadiene-styrene polymer
CN 620A
CN 638A
CN 76RES4100
CN 76RES4402
CN 76RES4470
CN ABR 60
CN Afcolac B 101
CN Arlatex 43DA
CN Arolon 870W51
CN Asaflex 1015
CN Asaflex 845
CN Asaflex T 420
CN Asahi Dow 2301
CN B 1342
CN BASF 661
CN BS 65GPN
CN Bustilat
CN Bustren 793
CN Butadiene-styrene copolymer
CN Butadiene-styrene polymer
CN Butadiene-styrene resin
CN Butakon 85-71
CN Butakon SL 104
CN Butofan DS 2095
CN Butofan LS 103
CN Butonal NS 129
CN C 26-II
CN C-Oil
CN CP 620A
CN CP 638
CN CP 692NA
CN D 1-240
CN Dan Bond
CN Darex 620L
CN Darex 637
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CN Denkacoat  
 CN Diabond 150A  
 CN Diarex 600  
 CN Dienol S  
 CN DL 219  
 CN DL 219 (binder)  
 CN DL 233A  
 CN DL 233NA  
 CN DL 239  
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 85947-40-6, 81406-92-0, 82028-80-6, 89771-18-6, 87915-64-8, 91261-65-3,  
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MF (C8 H8 . C4 H6)x

CI FMS, COM

PCT Polyolefin, Polystyrene

SR CA

LC STN Files: ADISNEWS, AGRICOLA, ANABSTR, BIOSIS, CA, CAPLUS, CBNB,  
 CHEMCATS, CHEMLIST, CIN, CSCHEM, CSNB, IFICDB, IFIPAT, IFIUDB, MSDS-OHS,  
 PIRA, PROMT, RTECS\*, TOXCENTER, TULSA, USPAT2, USPATFULL, USPATOLD  
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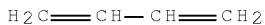
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(\*\*Enter CHEMLIST File for up-to-date regulatory information)

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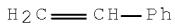
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2517 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA

48629 REFERENCES IN FILE CAPLUS (1907 TO DATE)

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L7 STR

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NUMBER OF NODES IS 3

## STEREO ATTRIBUTES: NONE

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44315 ANSWERS

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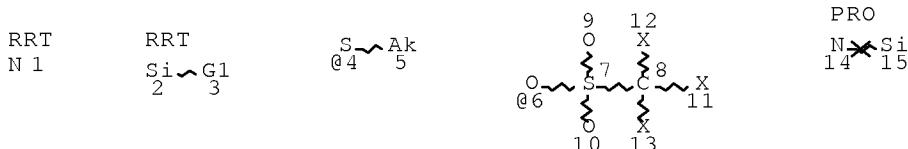
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L11 QUE ABB=ON PLU=ON OZAWA, Y?/AU  
L12 QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE))/CS, SO, PA  
L13 QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
L14 QUE ABB=ON PLU=ON ?CATALY?  
L15 QUE ABB=ON PLU=ON INITIAT? OR START?  
L16 QUE ABB=ON PLU=ON "POLYMERIZATION CATALYSTS"+PFT, OLD, N  
EW, NT/CT  
L17 19109 SEA FILE=HCAPLUS ABB=ON PLU=ON L9  
L18 974 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16  
L19 630 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L)(L13(L)(L14 OR L15))  
L21 QUE ABB=ON PLU=ON ?DIENE? ?DIENYL OR ?BUTADIEN?  
L22 QUE ABB=ON PLU=ON ?STYREN?  
L23 1 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND PMS/CI  
L24 48629 SEA FILE=HCAPLUS ABB=ON PLU=ON L23  
L25 6 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND (L18 OR L19)  
L26 27 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND L17

10/599,651

L27 27 SEA FILE=HCAPLUS ABB=ON PLU=ON (L25 OR L26)  
L28 26 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 AND ((L13 OR L14 OR L15  
OR L16) OR (L21 OR L22))  
L29 27 SEA FILE=HCAPLUS ABB=ON PLU=ON (L27 OR L28)  
L30 3 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND (L10 OR L11 OR L12)  
L31 0 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 AND L30  
L32 4 SEA FILE=HCAPLUS ABB=ON PLU=ON (L30 OR L31) OR L1  
L33 24 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 NOT L32  
L37 QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
L38 QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W)(AMINE OR AMINO))  
L39 QUE ABB=ON PLU=ON AMINES+PFT,OLD,NEW/CT (L) L38  
L40 71 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 (L)L37  
L41 5 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND (L16 OR (L13(5A)(L14  
OR L15)))  
L42 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND (L10 OR L11 OR L12)  
L43 1 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L1  
L44 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 OR L32  
L45 4 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 NOT L44  
L46 28 SEA FILE=HCAPLUS ABB=ON PLU=ON L45 OR L33  
L47 28 SEA FILE=HCAPLUS ABB=ON PLU=ON L46 NOT L44

=> d que stat 152

L48 STR



VAR G1=X/4/CN/6

NODE ATTRIBUTES:

NSPEC IS RC AT 1  
NSPEC IS RC AT 14  
NSPEC IS RC AT 15

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 15

STEREO ATTRIBUTES: NONE

L50 SCR 1967 OR 1936

L52 1306 SEA FILE=CASREACT SSS FUL (L50 AND L48) ( 10185 REACTIONS)

100.0% DONE 12341 VERIFIED 10185 HIT RXNS  
SEARCH TIME: 00.00.03

1306 DOCS

=> d que nos 156

L10 QUE ABB=ON PLU=ON SUZUKI, E?/AU  
L11 QUE ABB=ON PLU=ON OZAWA, Y?/AU  
L12 QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE))/  
CS, SO, PA  
L13 QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?

10/599,651

L14           QUE ABB=ON PLU=ON ?CATALY?  
L15           QUE ABB=ON PLU=ON INITIAT? OR START?  
L38           QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W) (AMINE OR AMINO))  
L48           STR  
L50           SCR 1967 OR 1936  
L52        1306 SEA FILE=CASREACT SSS FUL (L50 AND L48) ( 10185 REACTIONS)  
L53        58 SEA FILE=CASREACT ABB=ON PLU=ON L52 AND L38  
L54        4 SEA FILE=CASREACT ABB=ON PLU=ON L53 AND (L13(5A) (L14 OR  
          L15))  
L55        2 SEA FILE=CASREACT ABB=ON PLU=ON L52 AND (L10 OR L11 OR L12)  
L56        4 SEA FILE=CASREACT ABB=ON PLU=ON L54 NOT L55

=> d que 170

L2        1 SEA FILE=WPIX ABB=ON PLU=ON US2007-599651/APPS  
L10      QUE ABB=ON PLU=ON SUZUKI, E?/AU  
L11      QUE ABB=ON PLU=ON OZAWA, Y?/AU  
L12      QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE)) /  
          CS, SO, PA  
L13      QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
L14      QUE ABB=ON PLU=ON ?CATALY?  
L15      QUE ABB=ON PLU=ON INITIAT? OR START?  
L21      QUE ABB=ON PLU=ON ?DIENE? ?DIENYL OR ?BUTADIEN?  
L22      QUE ABB=ON PLU=ON ?STYREN?  
L37      QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
L38      QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W) (AMINE OR AMINO))  
L57      QUE ABB=ON PLU=ON C08F0036-04/IPC  
L58      QUE ABB=ON PLU=ON C08F0004-08/IPC  
L59      QUE ABB=ON PLU=ON C08F0004-10/IPC  
L61     230 SEA FILE=WPIX ABB=ON PLU=ON (F09/PLE (S) SI/PLE) (P)C293/PLE  
L62     6 SEA FILE=WPIX ABB=ON PLU=ON L61 AND L57  
L63     2 SEA FILE=WPIX ABB=ON PLU=ON L61 AND (L58 OR L59)  
L64     6 SEA FILE=WPIX ABB=ON PLU=ON (L62 OR L63)  
L65     6 SEA FILE=WPIX ABB=ON PLU=ON L64 AND ((L13 OR L14 OR L15) OR  
          (L21 OR L22) OR (L37 OR L38))  
L66     6 SEA FILE=WPIX ABB=ON PLU=ON (L64 OR L65)  
L67     2 SEA FILE=WPIX ABB=ON PLU=ON L66 AND (L10 OR L11 OR L12)  
L68     1 SEA FILE=WPIX ABB=ON PLU=ON L2 AND L67  
L69     2 SEA FILE=WPIX ABB=ON PLU=ON (L67 OR L68)  
L70     4 SEA FILE=WPIX ABB=ON PLU=ON L66 NOT L69

=> d his 175

(FILE 'ANTE, EMA, APOLLIT, RAPRA, INSPEC, COMPENDEX, MEDLINE, BIOSIS,  
EMBASE, PASCAL, SCISEARCH, CONFSCI, DISSABS, RDISCLOSURE' ENTERED AT  
14:45:25 ON 24 OCT 2008)

L75     2 S L73 NOT L74

=> d que 175

L10      QUE ABB=ON PLU=ON SUZUKI, E?/AU  
L11      QUE ABB=ON PLU=ON OZAWA, Y?/AU  
L12      QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE)) /  
          CS, SO, PA  
L13      QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
L14      QUE ABB=ON PLU=ON ?CATALY?  
L15      QUE ABB=ON PLU=ON INITIAT? OR START?  
L37      QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
L38      QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W) (AMINE OR AMINO))  
L71     829 SEA L38(5A) L37

L72 153786 SEA L13 (5A) (L14 OR L15)  
 L73 2 SEA L71 (15A) L72  
 L74 0 SEA L73 AND (L10 OR L11 OR L12)  
 L75 2 SEA L73 NOT L74

=> d que 180

L13 QUE ABB=ON PLU=ON ?POLYMER? OR COPOLYMER?  
 L14 QUE ABB=ON PLU=ON ?CATALY?  
 L15 QUE ABB=ON PLU=ON INITIAT? OR START?  
 L37 QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
 L38 QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W)(AMINE OR AMINO))  
 L57 QUE ABB=ON PLU=ON C08F0036-04/IPC  
 L76 78 SEA FILE=JAPIO ABB=ON PLU=ON L38(5A)L37  
 L77 1 SEA FILE=JAPIO ABB=ON PLU=ON L76 AND L57  
 L78 31301 SEA FILE=JAPIO ABB=ON PLU=ON L13 (5A)(L14 OR L15)  
 L79 1 SEA FILE=JAPIO ABB=ON PLU=ON L76 (20A)L78  
 L80 2 SEA FILE=JAPIO ABB=ON PLU=ON L77 OR L79

=> dup rem 147 156 170 175 180

DUPLICATE IS NOT AVAILABLE IN 'RDISCLOSURE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

FILE 'HCAPLUS' ENTERED AT 14:56:16 ON 24 OCT 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE 'CASREACT' ENTERED AT 14:56:16 ON 24 OCT 2008

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FILE 'WPIX' ENTERED AT 14:56:16 ON 24 OCT 2008

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FILE 'RAPRA' ENTERED AT 14:56:16 ON 24 OCT 2008

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FILE 'COMPENDEX' ENTERED AT 14:56:16 ON 24 OCT 2008

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FILE 'JAPIO' ENTERED AT 14:56:16 ON 24 OCT 2008

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PROCESSING COMPLETED FOR L47

PROCESSING COMPLETED FOR L56

PROCESSING COMPLETED FOR L70

PROCESSING COMPLETED FOR L75

PROCESSING COMPLETED FOR L80

L81 40 DUP REM L47 L56 L70 L75 L80 (0 DUPLICATES REMOVED)

ANSWERS '1-28' FROM FILE HCAPLUS

ANSWERS '29-32' FROM FILE CASREACT

ANSWERS '33-36' FROM FILE WPIX

ANSWER '37' FROM FILE RAPRA

ANSWER '38' FROM FILE COMPENDEX

ANSWERS '39-40' FROM FILE JAPIO

=> file stnguide

10/599,651

FILE 'STNGUIDE' ENTERED AT 14:56:35 ON 24 OCT 2008  
USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT  
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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Oct 17, 2008 (20081017/UP).

=> d ibib ed abs hitind hitstr 1-10

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' - CONTINUE? (Y)/N:y

L81 ANSWER 1 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:1102557 HCAPLUS Full-text  
 DOCUMENT NUMBER: 149:357248  
 TITLE: Production of aminosilane-modified conjugated diene polymers and silica-filled rubber compositions  
 INVENTOR(S): Oshima, Mayumi  
 PATENT ASSIGNEE(S): Sumitomo Chemical Company, Limited, Japan  
 SOURCE: PCT Int. Appl., 54pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008108377	A1	20080912	WO 2008-JP53886	20080227
W: AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
JP 2008239966	A	20081009	JP 2008-43945	20080226
PRIORITY APPLN. INFO.:			JP 2007-48930	A 20070228

ED Entered STN: 12 Sep 2008

AB The invention relates to a conjugated diene-based polymer capable of providing a polymer composition which is excellent in reduction in fuel consumption when silica is incorporated as a filler, a process for producing the conjugated diene-based polymer, and a polymer composition comprising the conjugated diene-based polymer and silica. The conjugated diene-based polymer comprises a conjugated diene unit and a constitutional unit expressed by the formula -CH<sub>2</sub>-CH(SiX<sub>1</sub>X<sub>2</sub>X<sub>3</sub>)-, which is positioned between one of the conjugated diene units and another one of the conjugated diene units, where X<sub>1</sub>, X<sub>2</sub> and X<sub>3</sub> represent independently a group expressed by the formula -NR<sub>1</sub>R<sub>2</sub>, hydroxyl, or alkyl, and at least one of X<sub>1</sub>, X<sub>2</sub> and X<sub>3</sub> is the group expressed by the formula -NR<sub>1</sub>R<sub>2</sub> or hydroxyl, where R<sub>1</sub> and R<sub>2</sub> represent independently a hydrocarbon group having 1 to 6 carbon atoms which may contain a nitrogen atom, an oxygen atom, or a silicon atom, and R<sub>1</sub> and R<sub>2</sub> may be joined to form a ring.

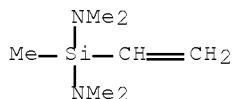
CC 39-4 (Synthetic Elastomers and Natural Rubber)

IT Styrene-butadiene rubber, preparation

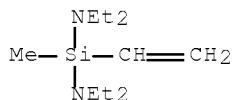
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(aminosilane-containing; production of aminosilane-modified conjugated diene

IT polymers and silica-filled rubber compns.)  
Polymerization  
 (anionic, living; production of aminosilane-modified conjugated diene polymers and silica-filled rubber compns.)  
 IT 13368-45-1, Bis(dimethylamino)methylvinylsilane 18023-34-2  
 , Bis(diethylamino)methylvinylsilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (production of aminosilane-modified conjugated diene polymers and silica-filled rubber compns.)  
 IT 9003-55-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (styrene-butadiene rubber, aminosilane-containing;  
 production of aminosilane-modified conjugated diene polymers and silica-filled rubber compns.)  
 IT 13368-45-1, Bis(dimethylamino)methylvinylsilane 18023-34-2  
 , Bis(diethylamino)methylvinylsilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (production of aminosilane-modified conjugated diene polymers and silica-filled rubber compns.)  
 RN 13368-45-1 HCAPLUS  
 CN Silanediamine, 1-ethenyl-N,N,N',N',1-pentamethyl- (CA INDEX NAME)



RN 18023-34-2 HCAPLUS  
 CN Silanediamine, 1-ethenyl-N,N,N',N'-tetraethyl-1-methyl- (CA INDEX NAME)



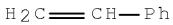
IT 9003-55-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (styrene-butadiene rubber, aminosilane-containing;  
 production of aminosilane-modified conjugated diene polymers and silica-filled rubber compns.)  
 RN 9003-55-8 HCAPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
CMF C8 H8

REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 2 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2008:806119 HCPLUS Full-text  
 DOCUMENT NUMBER: 149:87772  
 TITLE: Polymer coating comprising silane derivatives, lactone polymer, and polyester bonded to metal surfaces of medical devices such as stents  
 INVENTOR(S): Zhao, Jonathon Z.  
 PATENT ASSIGNEE(S): Cordis Corporation, USA  
 SOURCE: PCT Int. Appl., 48pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 2  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2008079549	A2	20080703	WO 2007-US84948	20071116
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
US 20080152929	A1	20080626	US 2006-614395	20061221
PRIORITY APPLN. INFO.:			US 2006-614395	A 20061221
ED Entered STN: 04 Jul 2008				
AB Coatings are provided in which surfaces may be activated by covalently bonding a combination of silane derivs. (A) to the metal surface, covalently bonding a lactone polymer (B) to the silane derivative by in situ ring opening polymerization, and depositing at least one layer of a polyester (C) on the bonded lactone polymer. Biol. active agents or therapeutic compds. may be				

deposited with any of the polyester layers. Such coated surfaces may be useful in medical devices, in particular stents. Coatings are provided in which surfaces may be activated by covalently bonding a combination of silane derivs. (A) to the metal surface, covalently bonding a lactone polymer (B) to the silane derivative by in situ ring opening polymerization, and depositing at least one layer of a polyester (C) on the bonded lactone polymer. Biol. active agents or therapeutic compds. may be deposited with any of the polyester layers. Such coated surfaces may be useful in medical devices, in particular stents.

CC 63-7 (Pharmaceuticals)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
(diamines; polymer coating comprising silane  
derivs., lactone polymer, and polyester bonded to metal surfaces of  
medical devices such as stents)

IT Anti-inflammatory agents

Anticoagulants

Coating process

Cytotoxic agents

Epoxy group

Medical goods

Pharmaceutical coatings

Pharmaceutical implants

Polymerization catalysts

Silylation

Sulphydryl group

(polymer coating comprising silane derivs., lactone polymer, and polyester bonded to metal surfaces of medical devices such as stents)

L81 ANSWER 3 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2008:772811 HCPLUS Full-text

DOCUMENT NUMBER: 149:87729

TITLE: Polymer coating comprising silane derivatives, lactone polymer, and polyester bonded to metal surfaces of medical devices such as stents

INVENTOR(S): Zhao, Jonathon Z.

PATENT ASSIGNEE(S): USA

SOURCE: U.S. Pat. Appl. Publ., 15pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20080152929	A1	20080626	US 2006-614395	20061221
WO 2008079549	A2	20080703	WO 2007-US84948	20071116
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

PRIORITY APPLN. INFO.:

US 2006-614395

A 20061221

ED Entered STN: 26 Jun 2008

AB Coatings are provided in which surfaces may be activated by covalently bonding a combination of silane derivs. (A) to the metal surface, covalently bonding a lactone polymer (B) to the silane derivative by in situ ring opening polymerization, and depositing at least one layer of a polyester (C) on the bonded lactone polymer. Biol. active agents or therapeutic compds. may be deposited with any of the polyester layers. Such coated surfaces may be useful in medical devices, in particular stents.

INCL 428447000; 029527300; 623001150

CC 63-7 (Pharmaceuticals)

IT Amines, reactions

RL: RCT (Reactant); RACT (Reactant or reagent)  
diamines; polymer coating comprising silane  
 derivs., lactone polymer, and polyester bonded to metal surfaces of  
 medical devices such as stents)

IT Anti-inflammatory agents

Anticoagulants

Coating process

Cytotoxic agents

Epoxy group

Medical goods

Pharmaceutical coatings

Pharmaceutical implants

Polymerization catalysts

Silylation

Sulphydryl group

(polymer coating comprising silane derivs., lactone polymer, and  
 polyester bonded to metal surfaces of medical devices such as stents)

L81 ANSWER 4 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2007:874510 HCAPLUS Full-text

DOCUMENT NUMBER: 147:236521

TITLE: Hydrogenated diene polymer compositions and their  
 moldings for vibration dampersINVENTOR(S): Suzuki, Takahisa; Higuchi, Motoharu; Hasegawa, Kenji;  
 Nosaka, Naoya

PATENT ASSIGNEE(S): JSR Corporation, Japan

SOURCE: PCT Int. Appl., 44pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007088980	A1	20070809	WO 2007-JP51822	20070202
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				

EP 1980589	A1	20081015	EP 2007-707971	20070202
R: DE, FR, GB				
PRIORITY APPLN. INFO.:			JP 2006-26048	A 20060202
			JP 2006-73219	A 20060316
			WO 2007-JP51822	W 20070202

- ED Entered STN: 10 Aug 2007
- AB A title composition contains 100 parts a first hydrogenated diene polymers having vinyl configuration units before hydrogenation (A1) of 20-70%, hydrogenation degree (A2) of 72-96%, polydispersity (Mw/Mn) of 1.0-3.0, weight-average mol. weight (Mw) of 105-1,700,000 and 5-100 parts a first fillers. A composition containing a hydrogenated butadiene rubber (HBR; with A1 35.2%, A2 91.2%, Mw = 752,000, Mw/Mn 1.09; prepared in presence of LiH and titanocene dichloride hydrogenation catalyst) 100, Nipsil ER 30, Percumyl D 5, and S 0.2 parts showed good processability and was vulcanized to form a sheet with compression set (120°, 70 h) 22%, and static/dynamic modulus ratio 1.41; vs., 46 and 2.38, resp., for a sheet prepared from a similar composition containing HBR with A1 60.9, A2 90.4, Mw 265,000, and Mw/Mn 1.21.
- CC 39-9 (Synthetic Elastomers and Natural Rubber)
- IT Synthetic rubber, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(butadiene-isoprene, hydrogenated; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)
- IT Synthetic rubber, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(butadiene-isoprene-styrene, hydrogenated; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)
- IT Butadiene rubber, preparation  
Styrene-butadiene rubber, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(hydrogenated; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)
- IT 9003-17-2DP, hydrogenated  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(butadiene rubber; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)
- IT 2530-86-1, N,N-Dimethylaminopropyltrimethoxysilane 10026-04-7, Silicon tetrachloride 124885-97-8 201290-01-9 945662-87-3  
 RL: MOA (Modifier or additive use); USES (Uses)  
(in preparation of modified diene rubbers; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)
- IT 25102-52-7DP, Butadiene-isoprene copolymer,  
 hydrogenated 26602-62-0DP, Butadiene-isoprene-styrene copolymer, hydrogenated  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(rubber; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)
- IT 9003-55-8DP, hydrogenated

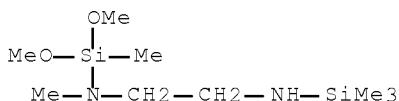
RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (styrene-butadiene rubber; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)

IT 945662-87-3

RL: MOA (Modifier or additive use); USES (Uses)  
 (in preparation of modified diene rubbers; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)

RN 945662-87-3 HCPLUS

CN 1,2-Ethanediamine, N1-(dimethoxymethylsilyl)-N1-methyl-N2-(trimethylsilyl)-  
 (CA INDEX NAME)



IT 9003-55-8DP, hydrogenated

RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (styrene-butadiene rubber; hydrogenated diene rubbers with controlled properties for compns. with low compression set for vibration dampers)

RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

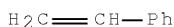
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



REFERENCE COUNT:

17

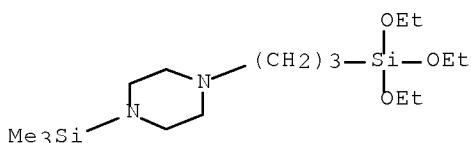
THERE ARE 17 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 5 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:350810 HCPLUS Full-text  
 DOCUMENT NUMBER: 146:360355  
 TITLE: Conjugated diene polymers for vulcanized rubbers with balanced properties for tire treads and their manufacture  
 INVENTOR(S): Yamada, Haruo; Toda, Keiichi; Ishimura, Norifusa  
 PATENT ASSIGNEE(S): Asahi Kasei Chemicals Corporation, Japan; Shin-Etsu Chemical Co., Ltd.  
 SOURCE: PCT Int. Appl., 56pp.  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

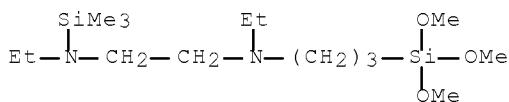
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007034785	A1	20070329	WO 2006-JP318514	20060919
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
EP 1942120	A1	20080709	EP 2006-810256	20060919
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR				
KR 2008035018	A	20080422	KR 2008-706898	20080321
CN 101268107	A	20080917	CN 2006-80034871	20080321
PRIORITY APPLN. INFO.:			JP 2005-275572	A 20050922
			WO 2006-JP318514	W 20060919

ED Entered STN: 29 Mar 2007  
 AB Title polymers are prepared by polymerizing conjugated dienes (CD) or CD and aromatic vinyl compds. (AV) in presence of organic alkali or alkaline earth metal compds. as initiators in hydrocarbon solvents, then reacting the living terminal groups of the formed polymers with low mol. weight compds. (OR<sub>4</sub>)<sub>g</sub>Si(R<sub>3</sub>-g)R<sub>1</sub>NR<sub>2</sub>SiR<sub>5</sub>R<sub>6</sub>R<sub>7</sub> (I; R<sub>1</sub> = the aminosilyl N atom not adjacent N-containing organic group having mol. weight of ≤103; R<sub>2</sub> = C<sub>1</sub>-10 hydrocarbyl or H-free Si-, O-, N-, or S-substituted C<sub>1</sub>-10 hydrocarbyl; R<sub>3</sub>, R<sub>4</sub> = C<sub>1</sub>-20 alkyl or aryl; R<sub>5</sub>-R<sub>7</sub> = C<sub>1</sub>-20 alkyl or aryl, C<sub>1</sub>-12 alkoxy; g = 1-3 integer; the R<sub>1</sub>-R<sub>2</sub> capable to form heterocyclic ring with N in I). A 3-trimethoxysilylpropyl-N,N'-diethyl- N'trimethylsilylethane-1,2-diamine-modified 25:75 styrene- butadiene rubber (prepared as described above) showed modification degree 83% and Mooney viscosity (VS) of 53, 70 parts of which was kneaded with natural rubber 30, SiO<sub>2</sub> 45, and carbon black 5 parts with other additives to form a composition with VS 64 and filler-bound rubber content 62%; the composition was mixed with S and vulcanization accelerators and pressed at 160° to form a sheet with heat developing temperature 20°, 0° tanδ 0.648 at 1% strain, 50° tanδ 0.073 at 3% strain, 50° ΔG' 0.68 Mpa, and high wear resistance.  
 CC 39-13 (Synthetic Elastomers and Natural Rubber)

- IT Styrene-butadiene rubber, preparation  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (reaction products; manufacture of alkoxy or aryloxy silylamine-modified conjugated diene rubbers for tire treads)
- IT 911696-16-7DP, reaction products with living SBR  
930297-45-3DP, reaction products with living SBR  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (rubber; manufacture of alkoxy or aryloxy silylamine-modified conjugated diene rubbers for tire treads)
- IT 9003-55-8DP, reaction products  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (styrene-butadiene rubber; manufacture of alkoxy or aryloxy silylamine-modified conjugated diene rubbers for tire treads)
- IT 911696-16-7DP, reaction products with living SBR  
930297-45-3DP, reaction products with living SBR  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (rubber; manufacture of alkoxy or aryloxy silylamine-modified conjugated diene rubbers for tire treads)
- RN 911696-16-7 HCPLUS
- CN Piperazine, 1-[3-(triethoxysilyl)propyl]-4-(trimethylsilyl)- (CA INDEX NAME)



- RN 930297-45-3 HCPLUS
- CN 1,2-Ethanediamine, N1,N2-diethyl-N1-[3-(trimethoxysilyl)propyl]-N2-(trimethylsilyl)- (CA INDEX NAME)

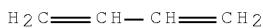


- IT 9003-55-8DP, reaction products  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (styrene-butadiene rubber; manufacture of alkoxy or aryloxy silylamine-modified conjugated diene rubbers for tire treads)

RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

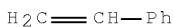
CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8



REFERENCE COUNT: 13 THERE ARE 13 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 6 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:1253818 HCPLUS Full-text  
 DOCUMENT NUMBER: 146:28409  
 TITLE: Polymer compositions and adhesives, coatings and sealants therefrom  
 INVENTOR(S): Feng, Ta-Min; Mishra, Steve S.  
 PATENT ASSIGNEE(S): Tremco Incorporated, USA  
 SOURCE: PCT Int. Appl., 21pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2006128015	A2	20061130	WO 2006-US20492	20060524
WO 2006128015	A3	20080515		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AP, EA, EP, OA				
US 20060270770	A1	20061130	US 2005-138730	20050526

AU 2006249754	A1 20061130	AU 2006-249754	20060524
CA 2609555	A1 20061130	CA 2006-2609555	20060524
EP 1943303	A2 20080716	EP 2006-784487	20060524
R: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LI, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR, AL, BA, HR, MK, YU			
CN 101287786	A 20081015	CN 2006-80017503	20071120
MX 200714661	A 20080211	MX 2007-14661	20071122
KR 2008011431	A 20080204	KR 2007-728625	20071207
PRIORITY APPLN. INFO.:		US 2005-138730	A 20050526
		WO 2006-US20492	W 20060524

ED Entered STN: 01 Dec 2006

AB The compns. contain: (A) 1-99% silane group-containing organic polymer with mol. weight  $\geq 1000$ , (B) 1-45%  $\geq 1$  organopolysiloxanes, and (C) 0-98% organic polymer that lacks functional silane groups. A typical composition comprised silane and aromatic alc. end-capped polyurethane polymer 27.86, 80,000 cps silane terminated dimethylpolysiloxane 5, 20,000 cps silane terminated dimethylpolysiloxane 5, organic plasticizer 9, white tint paste 6.5, coated precipitated calcium carbonate 41, rheol. control agent 0.5, fume silica 0.5, UV stabilizer 0.4, hexamethyldisilazane 1, vinyltrimethoxysilane 1, methyltris-methylethylketoximilosilane 0.8, vinyltris-methylethylketoximilosilane 0.8, aminopropyltrimethoxysilane 0.1, N-ethylaminoisobutyltrimethoxysilane 0.5, dibutyltin diacetate 0.04 parts.

CC 37-6 (Plastics Manufacture and Processing)

IT Adhesion promoters

Adhesives

Catalysts

Coating materials

Crosslinking agents

Fungicides

Sealing compositions

Thickening agents

UV stabilizers

(polymer compns. and adhesives, coatings and sealants therefrom)

IT 78-10-4, Tetraethoxysilane 471-34-1, Calcium carbonate, uses 999-97-3,

Hexamethyldisilazane 1067-33-0, Dibutyltin diacetate 1185-55-3,

Methyltrimethoxysilane 1305-78-8, Calcium oxide, uses 1314-13-2, Zinc oxide, uses 1335-30-4, Aluminum silicate 2224-33-1, Vinyltris(methyl ethyl ketoximino)silane 2530-83-8, Glycidoxypropyltrimethoxysilane 2768-02-7, Vinyl trimethoxysilane 6651-38-3 13822-56-5,

Aminopropyltrimethoxysilane 14807-96-6, Talc, uses 15332-99-7,

Vinyltriisopropenoxy silane 15901-40-3,

Methyltriscyclohexylaminosilane 22984-54-9, Methyltris(methyl ethyl ketoximato)silane 37697-65-7, Methyltris(sec-butylamino)silane

227085-51-0, N-Ethylaminoisobutyltrimethoxysilane

RL: MOA (Modifier or additive use); USES (Uses)

(polymer compns. and adhesives, coatings and sealants therefrom)

IT 9002-86-2, Polyvinylchloride 9003-17-2, Polybutadiene

9003-53-6, Polystyrene 9003-55-8, Butadiene-

styrene copolymer 9016-00-6, Dimethyl siloxane

31692-79-2

RL: POF (Polymer in formulation); USES (Uses)

(polymer compns. and adhesives, coatings and sealants therefrom)

IT 15901-40-3, Methyltriscyclohexylaminosilane 37697-65-7,

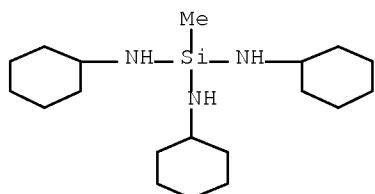
Methyltris(sec-butylamino)silane

RL: MOA (Modifier or additive use); USES (Uses)

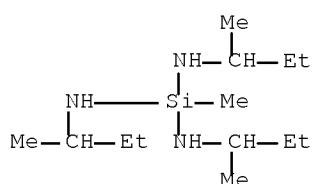
(polymer compns. and adhesives, coatings and sealants therefrom)

RN 15901-40-3 HCPLUS

CN Silanetriamine, N,N',N''-tricyclohexyl-1-methyl- (CA INDEX NAME)



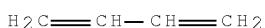
RN 37697-65-7 HCPLUS  
 CN Silanetriamine, 1-methyl-N,N',N'''-tris(1-methylpropyl)- (CA INDEX NAME)



IT 9003-55-8, Butadiene-styrene copolymer  
 RL: POF (Polymer in formulation); USES (Uses)  
 (polymer compns. and adhesives, coatings and sealants therefrom)  
 RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8

L81 ANSWER 7 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2006:1062339 HCPLUS Full-text  
 DOCUMENT NUMBER: 145:398956

TITLE: Abrasion-resistant amino-substituted aromatic compound-terminated conjugated diolefin polymers and their manufacture

INVENTOR(S): Matsumoto, Takaomi; Tadaki, Toshihiro

PATENT ASSIGNEE(S): Jsr Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 24pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006274178	A	20061012	JP 2005-99059	20050330
PRIORITY APPLN. INFO.:			JP 2005-99059	20050330

OTHER SOURCE(S): MARPAT 145:398956

ED Entered STN: 12 Oct 2006

AB The conjugated diolefin polymers, useful for tires, comprise conjugated diene polymers or conjugated diene-aromatic vinyl compound copolymers and ends of CH<sub>2</sub>-aromatic compds.-NH<sub>2</sub>-o. Thus, 1,3-butadiene was polymerized with styrene in the presence of THF and a BuLi/N,N-bis(trimethylsilyl)-o-toluidine catalyst in cyclohexane to give an amino-terminated SBR showing Mw 320,000 and Mooney viscosity (ML1+4, at 100°, JIS K 6300) 55. A vulcanized composition comprising the amino-terminated SBR showed balanced with low rolling resistance and good wet-skid resistance.

CC 39-13 (Synthetic Elastomers and Natural Rubber)

ST abrasion resistance amino terminated SBR tire; wet skid resistance tire bistrimethylsilyltoluidine SBR; low rolling resistance tire amino SBR; butyllithium bistrimethylsilyltoluidine catalyst cyclohexane solvent SBR

IT Styrene-butadiene rubber, preparation

RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (amino-terminated; abrasion-resistant NH<sub>2</sub>-substituted aromatic compound-terminated and modified SBR for tires)

IT Solvents

(hydrocarbons, for polymerization; abrasion-resistant NH<sub>2</sub>-substituted aromatic compound-terminated and modified SBR for tires)

IT Butadiene rubber, uses

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (of cis-1,4-configuration, BR 01; abrasion-resistant NH<sub>2</sub>-substituted aromatic compound-terminated and modified SBR for tires)

IT Hydrocarbons, uses

RL: NUU (Other use, unclassified); USES (Uses) (polymerization solvents; abrasion-resistant NH<sub>2</sub>-substituted aromatic compound-terminated and modified SBR for tires)

IT Polymerization

Polymerization catalysts (solution; abrasion-resistant NH<sub>2</sub>-substituted aromatic compound-terminated and modified SBR for tires)

and

modified SBR for tires)

IT 9003-17-2D, of cis-1,4-configuration

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses) (butadiene rubber, BR 01; abrasion-resistant NH<sub>2</sub>-substituted aromatic compound-terminated and modified SBR for tires)

IT 109-72-8DP, Butyllithium, reaction products with

N,N-bistrimethylsilyl-o-toluidine, reaction products with SBR

7439-93-2DP, Lithium, reaction products with  
 N,N-bistrimethylsilyl-o-toluidine, reaction products with SBR  
 126742-78-7DP, N,N-Bis(trimethylsilyl)-o-toluidine, reaction products with  
 lithium derivs., reaction products with SBR 911483-44-8DP,  
 N,N,N',N'-Tetrakis(trimethylsilyl)-3,3'-dimethyl-4,4'-  
 diaminodiphenylmethane, reaction products with lithium derivs., reaction  
 products with SBR  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in  
 formulation); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
(polymerization catalyst, rubber; abrasion-resistant  
 NH2-substituted aromatic compound-terminated and modified SBR for tires)

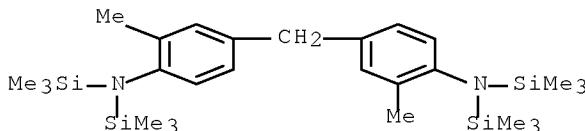
IT 110-82-7, Cyclohexane, uses  
 RL: NUU (Other use, unclassified); USES (Uses)  
(polymerization solvent; abrasion-resistant NH2-substituted aromatic  
 compound-terminated and modified SBR for tires)

IT 9003-55-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(styrene-butadiene rubber, amino-terminated;  
 abrasion-resistant NH2-substituted aromatic compound-terminated and  
 modified  
 SBR for tires)

IT 911483-44-8DP, N,N,N',N'-Tetrakis(trimethylsilyl)-3,3'-dimethyl-  
 4,4'-diaminodiphenylmethane, reaction products with lithium derivs.,  
 reaction products with SBR  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); POF (Polymer in  
 formulation); TEM (Technical or engineered material use); PREP  
 (Preparation); USES (Uses)  
(polymerization catalyst, rubber; abrasion-resistant  
 NH2-substituted aromatic compound-terminated and modified SBR for tires)

RN 911483-44-8 HCPLUS

CN Silanamine, N,N'-(methylenebis(2-methyl-4,1-phenylene)]bis[1,1,1-trimethyl-  
 N-(trimethylsilyl)- (9CI) (CA INDEX NAME)



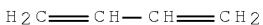
IT 9003-55-8P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM  
 (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(styrene-butadiene rubber, amino-terminated;  
 abrasion-resistant NH2-substituted aromatic compound-terminated and  
 modified  
 SBR for tires)

RN 9003-55-8 HCPLUS

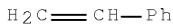
CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6



CM 2

CRN 100-42-5  
CMF C8 H8

L81 ANSWER 8 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:430844 HCPLUS Full-text  
 DOCUMENT NUMBER: 141:7642  
 TITLE: Process for homo or copolymerization of conjugated dienes and in situ formation of polymer blends and products made thereby  
 INVENTOR(S): Thiele, Sven K.-H.; Wilson, David R.; Knoll, Susanne; Nord, Gerhard; Leukefeld, Wilfried; Pistor, Ina  
 PATENT ASSIGNEE(S): Dow Global Technologies, Inc., USA  
 SOURCE: PCT Int. Appl., 58 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2004044018	A2	20040527	WO 2003-US33244	20031020
WO 2004044018	A3	20040805		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2003282957	A1	20040603	AU 2003-282957	20031020
PRIORITY APPLN. INFO.:			US 2002-424670P	P 20021107
			WO 2003-US33244	W 20031020

OTHER SOURCE(S): MARPAT 141:7642

ED Entered STN: 27 May 2004

AB Metal complexes are disclosed containing at least one metal-nitrogen metal-phosphorus bond, more particularly at least one metal-nitrogen or metal-phosphorus bond and at least one bond by the metal to an aromatic ring system. The preparation of the catalyst and the use of the prepared catalyst to produce homopolymers or copolymers of conjugated dienes or copolymers of conjugated dienes with alpha-olefins are also disclosed. In particular, the

production of (1) polymer blends of (a) homo or copolymers of conjugated dienes through polymerization of 1,3-butadiene and/or isoprene with (b) copolymers of conjugated dienes with alpha olefins through copolymer. of 1,3-butadiene or isoprene with ethylene, propene, octene or styrene and (2) polymer blends of (a) homo or copolymers of conjugated dienes through polymerization of 1,3-butadiene and/or isoprene with (b) homopolymers or copolymers of alpha olefins through homo or copolymer. of ethylene, propene, octene or styrene in the same reaction system using the catalyst system of the invention is described.

IC ICM C08F210-02  
 ICS C08F004-62

CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 29, 37, 39

ST conjugated diene polymer metal complex catalyst

IT Aluminoxanes  
 RL: CAT (Catalyst use); USES (Uses)  
 (Me; homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT Conveyor belts  
 Gaskets  
 Golf balls  
 Hoses  
Polymerization catalysts  
 Seals (parts)  
 Shoes  
 Tires  
 (homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT Butadiene rubber, preparation  
Styrene-butadiene rubber, preparation  
 Synthetic rubber, preparation  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT Molded plastics, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT Plastic foams  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT 9003-17-2P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
(butadiene rubber, homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT 135072-61-6P 135539-49-0P 203067-69-0P 203067-70-3P  
 479071-46-0P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT 9003-17-2P, 1,3-Butadiene homopolymer 9003-55-8P, 1,3-Butadiene-styrene copolymer 25068-01-3P,  
 1,3-Butadiene-ethylene copolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (homo or copolymer. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT 31554-37-7P 125542-03-2P 125542-04-3P 135609-98-2P

203067-67-8P 203067-68-9P 577995-02-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(homo or copolymn. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT 75-64-9, tert-Butylamine, reactions 75-78-5, Dimethyldichlorosilane 83-33-0, 1-Indanone 109-72-8, Butyllithium, reactions 123-75-1, Pyrrolidine, reactions 917-64-6, Methylmagnesium iodine 4249-10-9, 1,2,3,4-Tetramethylcyclopentadiene 7550-45-0, Titanium chloride (TiCl<sub>4</sub>), reactions 10026-11-6, Zirconium chloride (ZrCl<sub>4</sub>) 60556-33-4

RL: RCT (Reactant); RACT (Reactant or reagent)

(homo or copolymn. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

IT 9003-55-8P

RL: IMF (Industrial manufacture); PREP (Preparation)

(styrene-butadiene rubber, homo or copolymn

. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

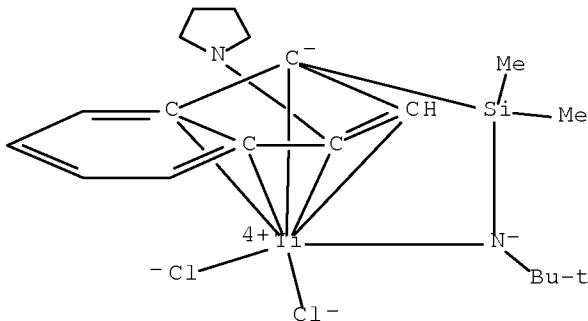
IT 203067-69-0P 203067-70-3P

RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)

(homo or copolymn. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

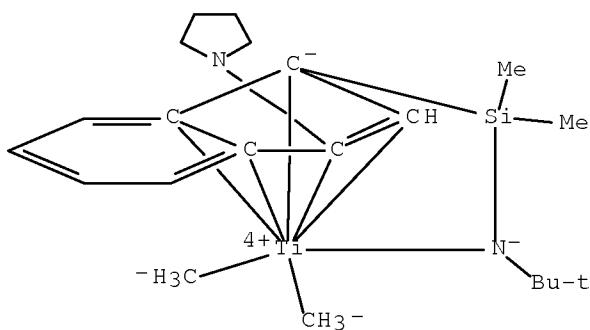
RN 203067-69-0 HCPLUS

CN Titanium, dichloro[N-(1,1-dimethylethyl)-1,1-dimethyl-1-[(1,2,3,3a,7a- $\eta$ )-3-(1-pyrrolidinyl)-1H-inden-1-yl]silanaminato(2-)- $\kappa$ N]- (CA INDEX NAME)



RN 203067-70-3 HCPLUS

CN Titanium, [N-(1,1-dimethylethyl)-1,1-dimethyl-1-[(1,2,3,3a,7a- $\eta$ )-3-(1-pyrrolidinyl)-1H-inden-1-yl]silanaminato(2-)- $\kappa$ N]dimethyl- (CA INDEX NAME)



IT 9003-55-8P, 1,3-Butadiene-styrene copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)  
 (homo or copolymn. of conjugated dienes and in situ formation  
 of polymer blends and products using metal complexes)

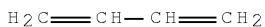
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

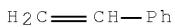
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8

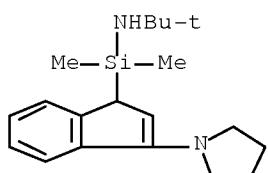


IT 203067-67-8P 203067-68-9P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT  
 (Reactant or reagent)  
 (homo or copolymn. of conjugated dienes and in situ formation  
 of polymer blends and products using metal complexes)

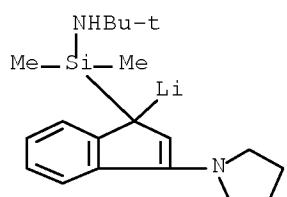
RN 203067-67-8 HCPLUS

CN Silanamine, N-(1,1-dimethylethyl)-1,1-dimethyl-1-[3-(1-pyrrolidinyl)-1H-inden-1-yl]- (CA INDEX NAME)



RN 203067-68-9 HCPLUS

CN Lithium, [1-[[(1,1-dimethylethyl)amino]dimethylsilyl]-3-(1-pyrrolidinyl)-1H-inden-1-yl]-, lithium salt (9CI) (CA INDEX NAME)



● Li

IT 9003-55-8P

RL: IMF (Industrial manufacture); PREP (Preparation)

(styrene-butadiene rubber, homo or copolymer)

. of conjugated dienes and in situ formation of polymer blends and products using metal complexes)

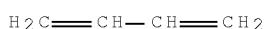
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

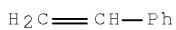
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



L81 ANSWER 9 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2004:759647 HCPLUS Full-text  
 DOCUMENT NUMBER: 141:278585  
 TITLE: Moisture-curable hot-melt sealants for glass constructions  
 INVENTOR(S): Nguyen-Misra, Mai T.; Acevedo, Margarita  
 PATENT ASSIGNEE(S): USA  
 SOURCE: U.S. Pat. Appl. Publ., 16 pp.  
 CODEN: USXXCO  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040180155	A1	20040916	US 2003-386823	20030313
US 6803412	B2	20041012		
WO 2004083296	A2	20040930	WO 2004-US7417	20040311
WO 2004083296	A3	20050407		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1601704	A2	20051207	EP 2004-719764	20040311
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK				
JP 2006523253	T	20061012	JP 2006-507073	20040311
PRIORITY APPLN. INFO.:			US 2003-386823	A 20030313
			WO 2004-US7417	W 20040311

ED Entered STN: 17 Sep 2004  
 AB A moisture-curable hot-melt sealant composition includes polyurethane prepolymer having  $\geq 1$  isocyanate functional groups and silane functional groups, reactive plasticizer capable of reacting with  $\geq 1$  polyurethane prepolymer and itself, and thermoplastic polymer. An example prepolymer was formed of MDI/PRIPLAST 3187/PRIPLAST 3190 copolymer reacted with Silquest A LINK 15.  
 IC ICM C08L075-00  
 INCL 428034000; X52-8 6.6; X52-510.0  
 CC 38-3 (Plastics Fabrication and Uses)  
 Section cross-reference(s): 57  
 IT Styrene-butadiene rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (block; moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)  
 IT Butadiene rubber, uses  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (hydroxy-terminated, polyurethane derivative, reaction products with silane; moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

IT Butyl rubber, uses  
 Isobutylene rubber  
Isoprene-styrene rubber  
 Polyamides, uses  
 Polyesters, uses  
 Polyimides, uses  
 Polysiloxanes, uses  
Styrene-butadiene rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

IT 9003-17-2DP, hydroxy-terminated  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(butadiene rubber, polyurethane derivative, reaction products with silane; moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

IT 25038-32-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (isoprene-styrene rubber; moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

IT 29382-69-2DP, DYNASYLAN 6490, reaction products with polyurethanes  
 227085-51-0DP, SilQUEST ALINK 15, reaction products with polyurethanes  
756857-38-2DP, reaction products with polyurethanes  
 757238-69-0DP, reaction products with silane 757238-70-3DP, reaction products with silane 757238-71-4DP, reaction products with silane 757238-72-5DP, reaction products with silane  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

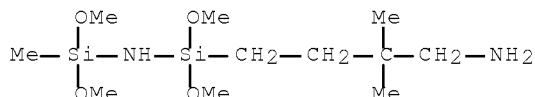
IT 9002-86-2, Polyvinyl chloride 9003-05-8, Polyacrylamide 9003-53-6,  
Polystyrene 24937-78-8, ATEVA 4030AC 25014-41-9,  
 Polyacrylonitrile  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

IT 9003-55-8 106107-54-4  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber; moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

IT 756857-38-2DP, reaction products with polyurethanes  
 RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (moisture-curable polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

RN 756857-38-2 HCPLUS

CN 2-Oxa-4-aza-3,5-disilanonane-3,5,9-triamine,  
 3,5,5-trimethoxy-3,8,8-trimethyl- (CA INDEX NAME)

IT 9003-55-8

RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
(styrene-butadiene rubber; moisture-curable  
 polyurethane/thermoplastic hot-melt adhesives for insulated glass unit constructions)

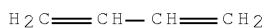
RN 9003-55-8 HCAPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

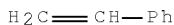
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



REFERENCE COUNT: 53 THERE ARE 53 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 10 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 2004:376293 HCAPLUS Full-text

DOCUMENT NUMBER: 141:71886

TITLE: Polymerization of butadiene and copolymerization of butadiene with styrene using neodymium amide catalysts

AUTHOR(S): Monteil, Vincent; Spitz, Roger; Boisson, Christophe  
 CORPORATE SOURCE: Laboratoire de Chimie et Procedes de Polymerization,  
 CNRS/CPE, Villeurbanne, 69616, Fr.

SOURCE: Polymer International (2004), 53(5), 576-581  
 CODEN: PLYIEI; ISSN: 0959-8103

PUBLISHER: John Wiley &amp; Sons Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

ED Entered STN: 10 May 2004

- AB The polymerization of butadiene was performed with catalysts based on the complex Nd{N(SiMe<sub>3</sub>)<sub>2</sub>}<sub>3</sub> (1). This amide complex in combination with methylaluminoxane or with a boron compound ([HNMe<sub>2</sub>Ph][B(C<sub>6</sub>F<sub>5</sub>)<sub>4</sub>], [CPh<sub>3</sub>][B(C<sub>6</sub>F<sub>5</sub>)<sub>4</sub>] or B(C<sub>6</sub>F<sub>5</sub>)<sub>3</sub>) and aluminum tri-iso-butyrate showed high activity and stereospecificity in polymerization of butadiene. The cationic complex [Nd{N(SiMe<sub>3</sub>)<sub>2</sub>}<sub>2</sub>(THF)<sub>2</sub>][B(C<sub>6</sub>F<sub>5</sub>)<sub>4</sub>] (2) was prepared by reaction of 1 and [HNMe<sub>2</sub>Ph][B(C<sub>6</sub>F<sub>5</sub>)<sub>4</sub>]. The catalyst 2/aluminum tri-iso-butyrate (ratio Al/Nd: 10/1) was highly active for butadiene polymerization. Copolymerization of butadiene and styrene was performed with the catalytic system Nd{N(SiMe<sub>3</sub>)<sub>2</sub>}<sub>3</sub>/[HNMe<sub>2</sub>Ph][B(C<sub>6</sub>F<sub>5</sub>)<sub>4</sub>]/ aluminum tri-iso-butyrate (3).
- CC 35-3 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 78
- ST butadiene styrene stereospecificity polymer catalyst amide complex prepn activator
- IT Aluminoxanes  
RL: CAT (Catalyst use); USES (Uses)  
(Me, polymerization catalyst, activator; butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT Solvent effect  
(butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT Polymerization catalysts  
(stereospecific; butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 108-88-3, Toluene, uses 110-82-7, Cyclohexane, uses 142-82-5, Heptane, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 9003-17-2P, Butadiene homopolymer 9003-55-8P, Butadiene-styrene copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 118612-00-3, Dimethylphenylammonium tetrakis(pentafluorophenyl)borate  
RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(catalyst preparation; butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 109-99-9, THF, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(catalyst preparation; butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 1109-15-5, Tris-Pentafluorophenylborane 3453-79-0, Aluminum tri-isobutylate 136040-19-2, Triphenylcarbenium tetrakis(pentafluorophenyl)borate  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalyst, activator; butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 96-10-6, uses  
RL: CAT (Catalyst use); USES (Uses)  
(polymerization catalyst; butadiene polymerization and copolymer. with styrene using neodymium amide catalysts)
- IT 41836-23-1, Neodymium tris[bis(trimethylsilyl)amide]

RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(polymerization catalyst; butadiene polymerization and copolymer with styrene using neodymium amide catalysts)

IT 712268-16-1P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
 USES (Uses)  
(polymerization catalyst; butadiene polymerization and copolymer with styrene using neodymium amide catalysts)

IT 9003-55-8P, Butadiene-styrene copolymer  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(butadiene polymerization and copolymer with styrene using neodymium amide catalysts)

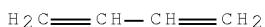
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

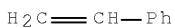
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



IT 712268-16-1P  
 RL: CAT (Catalyst use); SPN (Synthetic preparation); PREP (Preparation);  
 USES (Uses)  
(polymerization catalyst; butadiene polymerization and copolymer with styrene using neodymium amide catalysts)

RN 712268-16-1 HCPLUS

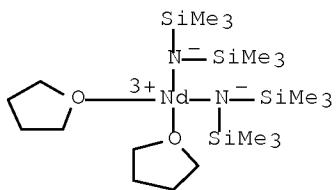
CN Neodymium(1+), bis(tetrahydrofuran)bis[1,1,1-trimethyl-N-(trimethylsilyl)silanaminato]-, (T-4)-, tetrakis(pentafluorophenyl)borate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 712268-15-0

CMF C20 H52 N2 Nd O2 Si4

CCI CCS

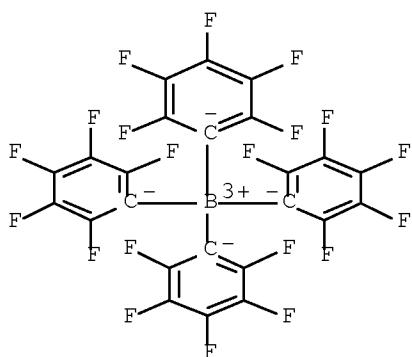


CM 2

CRN 47855-94-7

CMF C24 B F20

CCI CCS



REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=> d ibib ed abs hitind hitstr 11-28

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' - CONTINUE? (Y)/N:y

L81 ANSWER 11 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2002:868961 HCAPLUS Full-text  
 DOCUMENT NUMBER: 137:370473  
 TITLE: Random or block copolymers produced using  
       metal complex catalysts  
 INVENTOR(S): Thiele, Sven K. H.; Monroy, Victor M.; Wilson, David  
       R.  
 PATENT ASSIGNEE(S): Dow Global Technologies Inc., USA  
 SOURCE: PCT Int. Appl., 44 pp.  
       CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002090394	A1	20021114	WO 2002-US13830	20020430
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, YU, ZA, ZM, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
AU 2002259115	A1	20021118	AU 2002-259115	20020430
EP 1401879	A1	20040331	EP 2002-729100	20020430
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2002009515	A	20040713	BR 2002-9515	20020430
CN 1518561	A	20040804	CN 2002-809364	20020430
JP 2004532320	T	20041021	JP 2002-587470	20020430
US 20040241251	A1	20041202	US 2003-474145	20031003
ZA 2003007859	A	20041008	ZA 2003-7859	20031008
MX 2003PA10095	A	20040316	MX 2003-PA10095	20031104
PRIORITY APPLN. INFO.:			US 2001-288859P	P 20010504
			WO 2002-US13830	W 20020430

OTHER SOURCE(S): MARPAT 137:370473

ED Entered STN: 15 Nov 2002

AB Random or block copolymers are produced by using metal complex catalysts in a reaction of one conjugated diene monomer with one aromatic Random or block copolymers produced from aromatic  $\alpha$ -olefins and conjugated dienes by using metal complexes comprising group 3 to 10 metals in combination with activators and optionally a support material. More particularly the metal complexes used for the synthesis of copolymers are lanthanide metals. Even more particularly diene monomer(s) and aromatic  $\alpha$ -olefin monomer(s) such as, but not limited to, butadiene and styrene or isoprene and styrene are copolymerd. giving random or block copolymers butadiene, styrene and isoprene are copolymerd. giving random or block terpolymers using metal complexes comprising lanthanide metals in combination with activators and optionally a support material. Preferably random copolymers are formed.

IC ICM C08F004-52  
ICS C08F236-10

CC 35-3 (Chemistry of Synthetic High Polymers)

ST lanthanide complex catalyst diene copolymn

IT Aluminoxanes

RL: CAT (Catalyst use); USES (Uses)  
(Me; random or block copolymers produced using metal complex catalysts)

IT Aluminoxanes

RL: CAT (Catalyst use); USES (Uses)  
(iso-Bu; random or block copolymers produced using metal complex catalysts)

IT Polymerization catalysts

(random or block copolymers produced using metal complex catalysts)

IT Aluminoxanes

Coordination compounds  
Lewis acids

RL: CAT (Catalyst use); USES (Uses)  
(random or block copolymers produced using metal complex catalysts)

IT 96-10-6, Diethyl aluminum chloride, uses 97-93-8, Triethyl aluminum, uses 100-99-2, Tri-isobutyl aluminum, uses 109-72-8, Butyl lithium, uses 557-20-0, Diethyl zinc 693-04-9, Butyl magnesium chloride 811-49-4, Ethyl lithium 917-54-4, Methyl lithium 1109-15-5, Tris(pentafluorophenyl)boron 1119-90-0, Dibutyl zinc 1191-15-7, Di-isobutyl aluminum hydride 1191-47-5, Dibutyl magnesium 1779-25-5, Diisobutylaluminum chloride 2386-64-3, Ethyl magnesium chloride 2875-36-7, Octyl sodium 7412-67-1, Neopentylolithium 12075-68-2, Ethyl aluminum sesquichloride 24219-37-2, Dioctylmagnesium 38841-98-4, Octyl magnesium chloride 41836-23-1 69929-18-6, Butyl octyl magnesium 75173-82-9 148354-26-1 148354-27-2, Triethylsilyliumtetrakis(pentafluorophenyl)borate 168704-96-9, Tris(pentafluorophenyl)aluminum 169116-84-1 367951-69-7 475092-56-9 475092-59-2 475092-61-6 475092-63-8 475092-65-0  
475092-68-3 475092-70-7 475092-72-9 475092-73-0  
475092-75-2 475092-77-4 475092-79-6 475092-81-0 475092-83-2  
475092-85-4 475092-89-8 475092-91-2 475092-93-4 475092-96-7  
475092-98-9 475093-00-6 475093-02-8 475093-04-0  
475093-07-3 475093-09-5 475093-11-9 475093-14-2  
475093-16-4 475093-18-6 475093-20-0 475093-22-2 475093-25-5  
475093-27-7 475093-33-5 475093-35-7 475093-36-8 475093-38-0  
475093-40-4 475093-42-6 475093-44-8 475093-45-9 475093-46-0  
475093-47-1 475093-49-3 475093-51-7 475093-53-9 475093-55-1  
475093-57-3 475093-60-8 475093-62-0  
475093-64-2 475093-66-4 475093-68-6  
475093-71-1 475093-73-3 475093-75-5 475093-78-8  
475093-80-2 475093-82-4 475093-85-7 475093-87-9  
475093-89-1 475093-91-5 475093-93-7 475093-95-9  
475093-97-1 475094-03-2 475094-84-9 475105-49-8 475105-51-2  
RL: CAT (Catalyst use); USES (Uses)  
(random or block copolymers produced using metal complex catalysts)

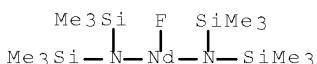
IT 9003-55-8P, Butadiene-Styrene copolymer

RL: IMF (Industrial manufacture); PREP (Preparation)  
(random or block copolymers produced using metal complex catalysts)

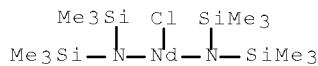
IT 475092-63-8 475092-65-0 475092-68-3  
475093-02-8 475093-04-0 475093-07-3  
475093-09-5 475093-57-3 475093-60-8  
475093-62-0 475093-64-2 475093-66-4  
475093-68-6 475093-71-1 475093-73-3  
475093-85-7 475093-89-1

RL: CAT (Catalyst use); USES (Uses)  
(random or block copolymers produced using metal complex catalysts)

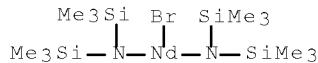
RN 475092-63-8 HCAPLUS  
CN Neodymium, fluorobis[1,1,1-trimethyl-N-(trimethylsilyl)silanaminato]- (CA INDEX NAME)



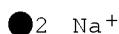
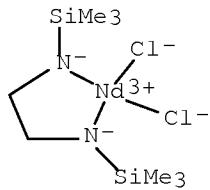
RN 475092-65-0 HCAPLUS  
CN Neodymium, chlorobis[1,1,1-trimethyl-N-(trimethylsilyl)silanaminato]- (CA INDEX NAME)



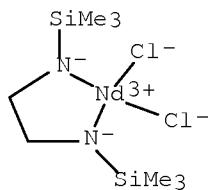
RN 475092-68-3 HCAPLUS  
 CN Neodymium, bromobis[1,1,1-trimethyl-N-(trimethylsilyl)silanaminato]- (CA INDEX NAME)



RN 475093-02-8 HCAPLUS  
 CN Neodymate(1-), [N,N'-bis(trimethylsilyl)-1,2-ethanediaminato(2-)-κN,κN']dichloro-, sodium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



RN 475093-04-0 HCAPLUS  
 CN Neodymate(1-), [N,N'-bis(trimethylsilyl)-1,2-ethanediaminato(2-)-κN,κN']dichloro-, potassium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



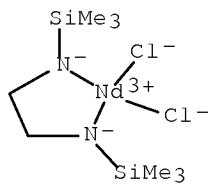
● Cl-

●<sub>2</sub> K<sup>+</sup>

RN 475093-07-3 HCAPLUS  
 CN Magnesium(1+), chloro-, (T-4)-[N,N'-bis(trimethylsilyl)-1,2-ethanediaminato(2-)-κN,κN']dichloroneodymate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 475093-06-2  
 CMF C8 H22 Cl2 N2 Nd Si2  
 CCI CCS

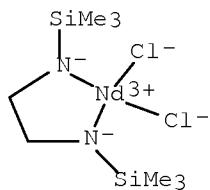


CM 2

CRN 32195-53-2  
 CMF Cl Mg  
 CCI CCS

- Cl - Mg<sup>2+</sup>

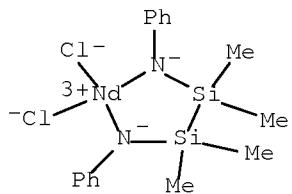
RN 475093-09-5 HCAPLUS  
 CN Neodymate(1-), [N,N'-bis(trimethylsilyl)-1,2-ethanediaminato(2-)-κN,κN']dichloro-, lithium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

●<sub>2</sub> Li<sup>+</sup>

RN 475093-57-3 HCAPLUS  
 CN Neodymate(1-), dichloro[1,1,2,2-tetramethyl-N,N'-diphenyl-1,2-disilanediaminato(2-)-κN,κN']-, potassium chloride (1:2:1), (T-4) - (9CI) (CA INDEX NAME)



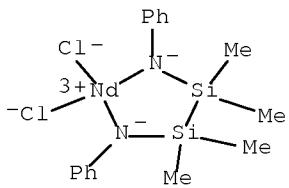
● Cl<sup>-</sup>

●<sub>2</sub> K<sup>+</sup>

RN 475093-60-8 HCAPLUS  
 CN Magnesium(1+), chloro-, (T-4)-dichloro[1,1,2,2-tetramethyl-N,N'-diphenyl-1,2-disilanediaminato(2-)-κN,κN']neodymate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 475093-59-5  
 CMF C16 H22 Cl2 N2 Nd Si2  
 CCI CCS



CM 2

CRN 32195-53-2

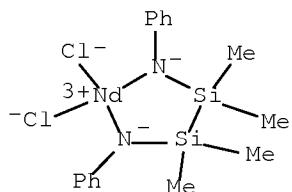
CMF Cl Mg

CCI CCS

-Cl-Mg<sup>2+</sup>

RN 475093-62-0 HCPLUS

CN Neodymate(1-), dichloro[1,1,2,2-tetramethyl-N,N'-diphenyl-1,2-disilanediato(2--κN,κN')]-, lithium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)

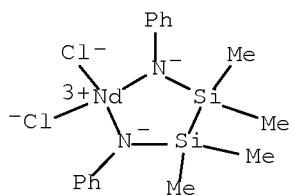


● Cl-

●<sub>2</sub> Li<sup>+</sup>

RN 475093-64-2 HCPLUS

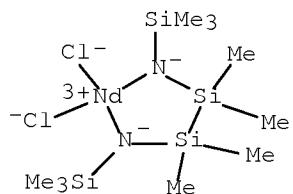
CN Neodymate(1-), dichloro[1,1,2,2-tetramethyl-N,N'-diphenyl-1,2-disilanediato(2--κN,κN')]-, sodium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

●<sub>2</sub> Na<sup>+</sup>

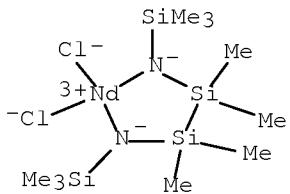
RN 475093-66-4 HCAPLUS  
 CN Neodymate(1-), dichloro[1,1,2,2-tetramethyl-N,N'-bis(trimethylsilyl)-1,2-disilanediaminato(2--κN,κN')]-, sodium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

●<sub>2</sub> Na<sup>+</sup>

RN 475093-68-6 HCAPLUS  
 CN Neodymate(1-), dichloro[1,1,2,2-tetramethyl-N,N'-bis(trimethylsilyl)-1,2-disilanediaminato(2--κN,κN')]-, potassium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



● Cl-

●2 K+

RN 475093-71-1 HCPLUS

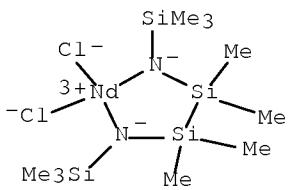
CN Magnesium(1+), chloro-, (T-4)-dichloro[1,1,2,2-tetramethyl-N,N'-bis(trimethylsilyl)-1,2-disilanedianimato(2-)-κN,κN']neodymate(1-) (9CI) (CA INDEX NAME)

CM 1

CRN 475093-70-0

CMF C10 H30 Cl2 N2 Nd Si4

CCI CCS



CM 2

CRN 32195-53-2

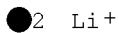
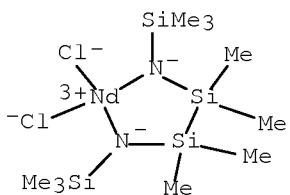
CMF Cl Mg

CCI CCS

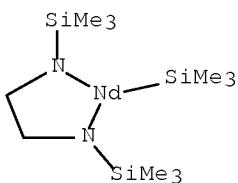
- Cl - Mg<sup>2+</sup>

RN 475093-73-3 HCPLUS

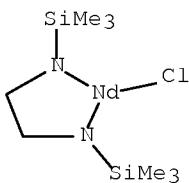
CN Neodymate(1-), dichloro[1,1,2,2-tetramethyl-N,N'-bis(trimethylsilyl)-1,2-disilanedianimato(2-)-κN,κN']-, lithium chloride (1:2:1), (T-4)- (9CI) (CA INDEX NAME)



RN 475093-85-7 HCPLUS  
 CN Neodymium, [N,N'-bis(trimethylsilyl)-1,2-ethanediaminato(2-)-  
 κN,κN'](trimethylsilyl)- (9CI) (CA INDEX NAME)



RN 475093-89-1 HCPLUS  
 CN Neodymium, [N,N'-bis(trimethylsilyl)-1,2-ethanediaminato(2-)-  
 κN,κN']chloro- (9CI) (CA INDEX NAME)

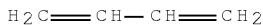


IT 9003-55-8P, Butadiene-Styrene  
copolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (random or block copolymers produced using metal complex  
catalysts)  
 RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

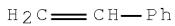
CM 1

CRN 106-99-0

CMF C4 H6



CM 2

CRN 100-42-5  
CMF C8 H8

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 12 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:923891 HCAPLUS Full-text  
 DOCUMENT NUMBER: 136:55057  
 TITLE: Use of an organosilicon compound bearing at least an activated double ethylene bond as coupling agent in rubber compositions comprising a white filler  
 INVENTOR(S): Barruel, Pierre; Guennouni, Nathalie; Parisot, Herve; Tardivat, Jean-Claude  
 PATENT ASSIGNEE(S): Rhodia Chimie, Fr.  
 SOURCE: PCT Int. Appl., 71 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001096443	A1	20011220	WO 2001-FR1856	20010614
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
FR 2810329	A1	20011221	FR 2000-7696	20000616
FR 2810329	B1	20021206		
CA 2412786	A1	20011220	CA 2001-2412786	20010614
EP 1299451	A1	20030409	EP 2001-945437	20010614
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001011844	A	20030923	BR 2001-11844	20010614
JP 2004503635	T	20040205	JP 2002-510575	20010614
MX 2002PA12507	A	20040910	MX 2002-PA12507	20021216

US 20040059049	A1	20040325	US 2003-311542	20030911
PRIORITY APPLN. INFO.:			FR 2000-7696	A 20000616
			WO 2001-FR1856	W 20010614

- ED Entered STN: 21 Dec 2001
- AB The invention concerns the use of a compound comprising a polyfunctional polyorganosiloxane (POS) bearing  $\geq 1$  hydroxyl radical and/or  $\geq 1$  alkoxy radical and  $\geq 1$  activated double ethylene bond, as coupling agent (white filler-elastomer) in rubber compns. based on isoprene elastomer(s) comprising a white filler as reinforcing filler. The invention also concerns isoprene elastomer compns. obtained by using said coupling agent, and elastomeric articles having a body comprising said compns. The coupling agent is a compound comprising a POS with similar or different units of formula  $(R)aYbXcSiO[4 - (a + b + c)]/2$  wherein: (1) R is a monovalent hydrocarbon group; (2) Y represents a OH or an alkoxy; (3) X is a function comprising an activated double ethylene bond selected among a maleimide, isomaleimide, maleamic acid, maleamic ester and acrylamide function; (4) a = 0, 1, 2 or 3, b = 0, 1, 2 or 3, c = 0 or 1, the sum a + b + c is different from 0 and  $\leq 3$ ; (5) function Y rate is  $\geq 0.8$ , (6) function X rate is  $\geq 0.4$  (rate = number of functions for 100 Si atoms). Adding 88.7 g hexamethylcyclotrisilazane in PhMe in 2 h 25 min to PhMe containing 320 g N-[3-(diethoxymethylsilyl)propyl]maleamic acid and 168.2 g ZnCl<sub>2</sub> at 72° and heating the reaction mixture 15 h at 75° gave a coupling agent containing 73.7% EtO[SiMe[(CH<sub>2</sub>)<sub>3</sub>R]O]1.75(SiMe<sub>2</sub>O)1.4[SiMe[(CH<sub>2</sub>)<sub>3</sub>NHCOCH:CHCO<sub>2</sub>H-cis]O]0.05Et (I), 23.1% (EtO)<sub>2</sub>MeSi(CH<sub>2</sub>)<sub>3</sub>R (R = maleimido), 0.7% (EtO)<sub>2</sub>MeSi(CH<sub>2</sub>)<sub>3</sub>NHCOCH:CHCO<sub>2</sub>H-cis, and 2.5% cyclic derivative of I.
- IC ICM C08G077-26  
ICS C08G077-388; C08K005-5425; C08K005-544; C08L021-00
- CC 39-9 (Synthetic Elastomers and Natural Rubber)
- ST activated ethylenic group contg polysiloxane coupling agent; diethoxymethylsilylpropylmaleamic acid hexamethylcyclotrisilazane copolymer manuf coupling agent filled rubber; isoprene rubber white filler coupling agent polysiloxane
- IT Butadiene rubber, uses  
Butyl rubber, uses  
Neoprene rubber, uses  
Nitrile rubber, uses  
Styrene-butadiene rubber, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(addnl. rubber; isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT Synthetic rubber, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(butadiene-isoprene-styrene; isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT Synthetic rubber, uses  
RL: POF (Polymer in formulation); USES (Uses)  
(butadiene-isoprene; isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT Isoprene rubber, uses  
Isoprene-styrene rubber  
RL: POF (Polymer in formulation); USES (Uses)  
(isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT 9003-17-2  
RL: POF (Polymer in formulation); USES (Uses)  
(butadiene rubber, addnl. rubber; isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)

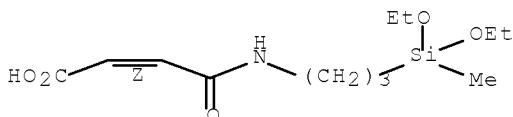
- IT 75-77-4DP, Trimethylchlorosilane, reaction products with N-[(diethoxymethylsilyl)propyl]maleamic acid-hexamethylcyclotrisilazane copolymers 31692-79-2DP, Dimethylsilanediol homopolymer, sru hydroxy-terminated, reaction products with hydroxy-terminated polydimethylsiloxane and N-(methoxycarbonylethylenecarbonyl)succinimide 31900-57-9DP, Dimethylsilanediol homopolymer, hydroxy-terminated, reaction products with hydroxy-terminated polydimethylsiloxane and N-(methoxycarbonylethylenecarbonyl)succinimide 158687-37-7DP, Poly[oxy[(3-aminopropyl)methylsilylene]], reaction products with hydroxy-terminated polydimethylsiloxane and N-(methoxycarbonylethylenecarbonyl)succinimide 201346-29-4DP, reaction products with hydroxy-terminated polydimethylsiloxane and N-(methoxycarbonylethylenecarbonyl)succinimide 381209-61-6DP, reaction products with trimethylchlorosilane 381209-61-6P 381209-62-7DP, reaction products with adducts of hydroxy-terminated polydimethylsiloxane and Aminopropylmethyldiethoxysilane  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT 25038-32-8  
RL: POF (Polymer in formulation); USES (Uses)  
(isoprene-styrene rubber, isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT 25102-52-7, 1,3-Butadiene-isoprene copolymer  
26602-62-0, 1,3-Butadiene-isoprene-styrene copolymer  
RL: POF (Polymer in formulation); USES (Uses)  
(rubber; isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT 9003-55-8  
RL: POF (Polymer in formulation); USES (Uses)  
(styrene-butadiene rubber, addnl. rubber; isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- IT 381209-61-6DP, reaction products with trimethylchlorosilane 381209-61-6P  
RL: IMF (Industrial manufacture); MOA (Modifier or additive use); PREP (Preparation); USES (Uses)  
(isoprene rubber composition containing white fillers and multifunctional polyorganosiloxanes as coupling agents)
- RN 381209-61-6 HCPLUS
- CN 2-Butenoic acid, 4-[[3-(diethoxymethylsilyl)propyl]amino]-4-oxo-, (2Z)-, polymer with 2,2,4,4,6,6-hexamethylcyclotrisilazane (9CI) (CA INDEX NAME)

CM 1

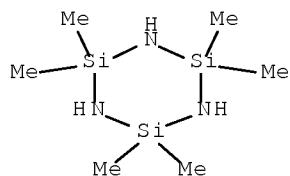
CRN 255819-38-6

CMF C12 H23 N O5 Si

Double bond geometry as shown.



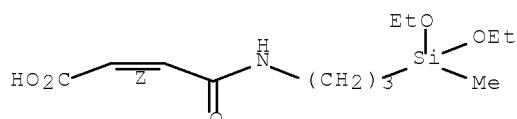
CM 2

CRN 1009-93-4  
CMF C6 H21 N3 Si3RN 381209-61-6 HCPLUS  
CN 2-Butenoic acid, 4-[3-(diethoxymethylsilyl)propyl]amino]-4-oxo-, (2Z)-, polymer with 2,2,4,4,6,6-hexamethylcyclotrisilazane (9CI) (CA INDEX NAME)

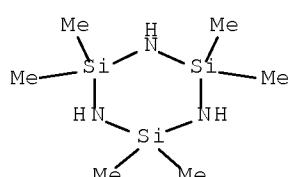
CM 1

CRN 255819-38-6  
CMF C12 H23 N O5 Si

Double bond geometry as shown.



CM 2

CRN 1009-93-4  
CMF C6 H21 N3 Si3

IT 9003-55-8

RL: POF (Polymer in formulation); USES (Uses)  
(styrene-butadiene rubber, addnl. rubber; isoprene  
rubber composition containing white fillers and multifunctional  
polyorganosiloxanes as coupling agents)

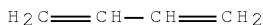
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

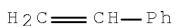
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 13 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:923890 HCPLUS Full-text  
 DOCUMENT NUMBER: 136:55067  
 TITLE: Rubber composition for tires containing a multifunctional polyorganosiloxane as coupling agent  
 INVENTOR(S): Tardivat, Jean-Claude; Pagano, Salvatore; Thonier, Christel; Guennouni, Nathalie  
 PATENT ASSIGNEE(S): Societe de Technologie Michelin, Fr.; Michelin Recherche et Technique S.A.  
 SOURCE: PCT Int. Appl., 67 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: French  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001096442	A1	20011220	WO 2001-EP6671	20010613
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2412360	A1	20011220	CA 2001-2412360	20010613
EP 1297055	A1	20030402	EP 2001-947362	20010613
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
BR 2001011734	A	20030527	BR 2001-11734	20010613

JP 2004503634	T 20040205	JP 2002-510574	20010613
CN 100334135	C 20070829	CN 2001-812834	20010613
MX 2002PA12423	A 20030606	MX 2002-PA12423	20021213
US 20030191225	A1 20031009	US 2002-320236	20021216
US 6878768	B2 20050412		
US 20050059773	A1 20050317	US 2004-946188	20040922
US 7186776	B2 20070306		
PRIORITY APPLN. INFO.:		FR 2000-7879	A 20000616
		WO 2001-EP6671	W 20010613
		US 2002-320236	A1 20021216

ED Entered STN: 21 Dec 2001

AB The invention concerns a sulfur-crosslinkable elastomer composition, for use in the manufacture of tires, comprising at least: (i) an isoprene elastomer, in particular natural rubber; (ii) a reinforcing inorg. filler, in particular silica; and (iii) as coupling agent (white filler/isoprene elastomer), a multifunctional polyorganosiloxane (POS) comprising, grafted on its silicon atoms, in 1 part  $\geq 1$  hydroxyl or hydrolyzable function and on another part  $\geq 1$  group bearing  $\geq 1$  activated ethylenic double bond. Said POS is, in particular, a POS with imide, acid or ester function, whereof the ethylenic double bond is activated by  $\geq 1$  adjacent carbonyl group. This coupling agent produces tires with low rolling resistance and high wear resistance. Adding 51.2 g hexamethylcyclotrisilazane in PhMe in 50 min to PhMe containing 181.8 g N-[3-(diethoxymethylsilyl)propyl]maleamic acid and 94.6 g ZnCl<sub>2</sub> at 90° and heating the reaction mixture 15 h at 80° gave a coupling agent containing 81.5% EtO[SiMe[(CH<sub>2</sub>)<sub>3</sub>R]O]1.8(SiMe<sub>2</sub>O)1.5Et and 18.5% (EtO)<sub>2</sub>MeSi(CH<sub>2</sub>)<sub>3</sub>R (R = maleimido).

IC ICM C08G077-26

ICS C08G077-388; C08K005-5425; C08K005-544; C08L021-00; B60C001-00

CC 39-13 (Synthetic Elastomers and Natural Rubber)

ST carbonyl activated ethylenic group contg polysiloxane coupling agent; diethoxymethylsilylpropylmaleamic acid hexamethylcyclotrisilazane copolymer manuf coupling agent filled rubber; isoprene rubber tire white filler coupling agent polysiloxane

IT Styrene-butadiene rubber, properties

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(SBR compns. containing white fillers and multifunctional polyorganosiloxanes as coupling agents for tires)

IT 31692-79-2DP, Dimethylsilanediol homopolymer, sru hydroxy-terminated, reaction products with hydroxy-terminated polydimethylsiloxane and N-(methoxycarbonylethylene carbonyl)succinimide 31900-57-9DP, Dimethylsilanediol homopolymer, hydroxy-terminated, reaction products with hydroxy-terminated polydimethylsiloxane and

N-(methoxycarbonylethylene carbonyl)succinimide 158687-37-7DP,

Poly[oxy[(3-aminopropyl)methylsilylene]], reaction products with hydroxy-terminated polydimethylsiloxane and

N-(methoxycarbonylethylene carbonyl)succinimide 201346-29-4DP, reaction products with hydroxy-terminated polydimethylsiloxane and

N-(methoxycarbonylethylene carbonyl)succinimide 381209-61-6P

381209-62-7DP, reaction products with adducts of hydroxy-terminated polydimethylsiloxane and aminopropylmethyl diethoxysilane

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(isoprene rubber compns. containing white fillers and multifunctional polyorganosiloxanes as coupling agents for tires)

IT 9003-55-8

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(styrene-butadiene rubber, SBR compns. containing white

fillers and multifunctional polyorganosiloxanes as coupling agents for tires)

IT 381209-61-6P

RL: IMF (Industrial manufacture); MOA (Modifier or additive use); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (isoprene rubber compns. containing white fillers and multifunctional polyorganosiloxanes as coupling agents for tires)

RN 381209-61-6 HCPLUS

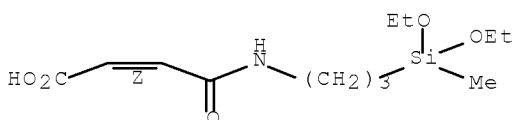
CN 2-Butenoic acid, 4-[3-(diethoxymethylsilyl)propyl]amino]-4-oxo-, (2Z)-, polymer with 2,2,4,4,6,6-hexamethylcyclotrisilazane (9CI) (CA INDEX NAME)

CM 1

CRN 255819-38-6

CMF C12 H23 N O5 Si

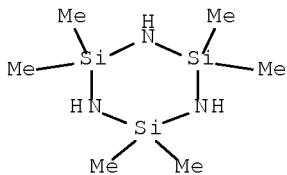
Double bond geometry as shown.



CM 2

CRN 1009-93-4

CMF C6 H21 N3 Si3



IT 9003-55-8

RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)

(styrene-butadiene rubber, SBR compns. containing white fillers and multifunctional polyorganosiloxanes as coupling agents for tires)

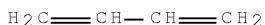
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

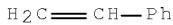
CM 1

CRN 106-99-0

CMF C4 H6



CM 2

CRN 100-42-5  
CMF C8 H8

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 14 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2001:137307 HCAPLUS Full-text  
 DOCUMENT NUMBER: 134:194449  
 TITLE: Chemically treating silica fillers with coupling agents and their use in rubber compounds  
 INVENTOR(S): Okel, Timothy A.; Hahn, James R.  
 PATENT ASSIGNEE(S): PPG Industries Ohio, Inc., USA; Dow Corning Corp.  
 SOURCE: PCT Int. Appl., 56 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 10  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001012733	A1	20010222	WO 2000-US22711	20000817
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000069159	A	20010313	AU 2000-69159	20000817
EP 1208164	A1	20020529	EP 2000-957560	20000817
EP 1208164	B1	20071024		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003531215	T	20031021	JP 2001-517623	20000817
CN 1312229	C	20070425	CN 2000-813061	20000817
AT 376573	T	20071115	AT 2000-957560	20000817
TW 502054	B	20020911	TW 2000-89116783	20001107
PRIORITY APPLN. INFO.:				
		US 1999-149757P	P	19990819
		US 1999-172309P	P	19991217
		US 2000-203428P	P	20000510
		US 2000-636308	A	20000811
		WO 2000-US22711	W	20000817

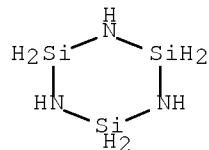
ED Entered STN: 25 Feb 2001

- AB Chemical-treated fillers are made by using a certain combination of functionalizing (coupling) agents of (a) mercaptoorganometallic compound and (b) non-sulfur organometallic compound at ratio  $\geq 0.05:1$  in an aqueous suspension of inorg. oxide, e.g. SiO<sub>2</sub>, optionally in the presence of surfactant and(or)water miscible solvent, having a pH  $\leq 2.5$  and increasing the pH to 3-10 of the suspension after chemical treating the filler. Fillers, e.g., inorg. oxides, were chemical treated to have a C content >1%, a mercapto content  $\leq 0.15\%$ , a Silane Conversion Index, SCI,  $\geq 0.3$ , and a Standard Reinforcement Index, SRI,  $\geq 4$ . Compns. such as polymers, cured organic rubber articles, master batches and slurries contain the hydrophobic fillers. Thus, SiO<sub>2</sub> treated with 3-mercaptopropyltrimethoxysilane and dichlorodimethylsilane (0.17:1) with a surface area 132 m<sup>2</sup>/g, C content 2.2%, SRI 4.8, SCI 0.55 and pH 6.0, was used in reinforcing rubber.
- IC ICM C09C001-30  
ICS C09C003-08; C09C003-12
- CC 39-9 (Synthetic Elastomers and Natural Rubber)
- IT Butadiene rubber, properties  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(Budene 1207; chemical-treated filler particulate with good dispersibility in rubber)
- IT Styrene-butadiene rubber, properties  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(Solflex 1216; chemical-treated filler particulate with good dispersibility in rubber)
- IT 9003-17-2  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(butadiene rubber, Budene 1207; chemical-treated filler particulate with good dispersibility in rubber)
- IT 56-33-7 75-77-4, Trimethylchlorosilane, uses 75-79-6,  
Methyltrichlorosilane 78-62-6, Dimethyldiethoxysilane 107-46-0,  
Hexamethyldisiloxane 124-70-9, Vinylmethyldichlorosilane 149-74-6,  
Methylphenyldichlorosilane 556-67-2, Octamethylcyclotetrasiloxane  
675-62-7, 3,3,3-Trifluoropropylmethyldichlorosilane 994-49-0,  
Hexaethyldisiloxane 999-97-3, Hexamethyldisilazane 1066-35-9,  
Dimethylchlorosilane 1112-39-6, Dimethyldimethoxysilane 1185-55-3,  
Methyltrimethoxysilane 1719-53-5, Diethyldichlorosilane 1719-58-0,  
Vinylidemethylchlorosilane 1825-61-2, Trimethylmethoxysilane 1825-62-3,  
Trimethylmethoxysilane 1825-65-6, Trimethylbutoxysilane 1873-92-3,  
Allylmethyldichlorosilane 2031-67-6, Methyltriethoxysilane 3901-77-7  
7538-45-6, Mercaptoethyltrimethoxysilane 13682-99-0 14814-09-6  
16522-50-2, Phenylethyldiethoxysilane 16546-47-7,  
Vinylidemethylmethoxysilane 16635-23-7 18006-13-8 18143-56-1,  
(Mercaptomethyl)dimethylethoxysilane 30102-73-9, 5  
Hexenyldimethylchlorosilane 30817-94-8, Mercaptomethyltrimethoxysilane  
31001-77-1, 3-Mercaptopropylmethyldimethoxysilane 35112-74-4  
40372-72-3 40550-17-2 41453-78-5 41453-79-6 42169-82-4  
53700-41-7 53700-42-8 55161-63-2, (Mercaptomethyl)methyldiethoxysilane  
56706-11-7 58495-78-6 59512-63-9 59512-74-2 60764-83-2  
79371-56-5 101820-15-9 115146-43-5,  
Hexenylmethyldichlorosilane 120813-52-7 131108-18-4 139489-51-3  
158053-36-2 180003-66-1 180003-68-3 195512-29-9 204845-87-4  
327025-69-4 327025-71-8 327025-72-9 327025-74-1 327025-75-2  
327025-76-3 327025-77-4 327025-78-5  
RL: MOA (Modifier or additive use); USES (Uses)  
(chemical-treated filler particulate with good dispersibility in rubber)
- IT 9003-55-8  
RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(styrene-butadiene rubber, Solflex 1216;  
chemical-treated filler particulate with good dispersibility in rubber)

IT 79371-56-5RL: MOA (Modifier or additive use); USES (Uses)  
(chemical-treated filler particulate with good dispersibility in rubber)

RN 79371-56-5 HCAPLUS

CN Cyclotrisilazane, triethenyltrimethyl- (9CI) (CA INDEX NAME)



3 ( D1—Me )

3 [ D1—CH=CH<sub>2</sub> ]IT 9003-55-8RL: POF (Polymer in formulation); PRP (Properties); USES (Uses)  
(styrene-butadiene rubber, Solflex 1216;  
chemical-treated filler particulate with good dispersibility in rubber)

RN 9003-55-8 HCAPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

CMF C4 H6

H<sub>2</sub>C=CH—CH=CH<sub>2</sub>

CM 2

CRN 100-42-5

CMF C8 H8

H<sub>2</sub>C=CH—PhREFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS  
RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMATL81 ANSWER 15 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN  
ACCESSION NUMBER: 1999:279739 HCAPLUS Full-text  
DOCUMENT NUMBER: 130:312240

TITLE: Process for preparing di(polycyclic amino) dialkoxysilane in the presence of a solvent mixture of an ether and an inert hydrocarbon solvent

INVENTOR(S): Ikai, Shigeru; Sakakibara, Yasuhisa; Fukunaga, Toshifumi

PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan

SOURCE: Eur. Pat. Appl., 8 pp.

CODEN: EPXXDW

DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 911338	A1	19990428	EP 1998-308617	19981021
EP 911338	B1	20021113		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
JP 11222491	A	19990817	JP 1998-318365	19981021
JP 3591338	B2	20041117		
US 5939573	A	19990817	US 1998-176539	19981021
PRIORITY APPLN. INFO.:			JP 1997-288277	A 19971021

ED Entered STN: 06 May 1999

AB A di(polycyclic amino)dialkoxysilane which is of value as an auxiliary catalyst component for polymerizing an  $\alpha$ -olefin to produce an  $\alpha$ -olefin polymer having a high stereoregularity and a broad mol. weight distribution (no data) is prepared by reacting a secondary polycyclic amine compound with an organomagnesium compound in an ether solvent, to produce a polycyclic amido magnesium compound, and reacting the polycyclic amido magnesium compound with a tetraalkoxysilane in a solvent mixture of an ether and an inert hydrocarbon. Thus, a process comprising (1) reacting 0.36 mol perhydroisoquinoline (trans/cis 1/3.2) and 0.42 mol butylmagnesium chloride (in 220 mL iso-Pr ether) in a solvent mixture of 100 mL THF and 300 mL n-heptane, and (2) subsequently reacting with 0.18 mol tetramethoxysilane, generated di(perhydroisoquinolino)dimethoxysilane showing trans-trans/trans-cis/cis-cis 6/36/58, b.p. 181°/1 mmHg, purity 96.6% and yield 90.7%, compared to 95.9% and 82.5%, resp., for a product generated with 450 mL n-heptane and no THF in step (1).

IC ICM C07F007-10  
ICS C07B049-00

ICI C07F007-10, C07D217-08, C07D215-58

CC 35-3 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 29, 67

IT Polymerization catalysts  
Solvents

(preparation of di(polycyclic amino) dialkoxysilane in the presence of a solvent mixture of an ether and an inert hydrocarbon solvent)

IT Amines, preparation

RL: CAT (Catalyst use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(silvyl; preparation of di(polycyclic amino) dialkoxysilane in the presence of a solvent mixture of an ether and an inert hydrocarbon solvent)

IT Polymerization catalysts

(stereospecific; preparation of di(polycyclic amino) dialkoxysilane in the presence of a solvent mixture of an ether and an inert hydrocarbon solvent)

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 16 OF 40 HCAPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:268555 HCAPLUS Full-text  
 DOCUMENT NUMBER: 128:322372  
 ORIGINAL REFERENCE NO.: 128:63903a,63906a  
 TITLE: Polymer mixtures containing polydiorganosiloxane urea-containing components, their manufacture and use thereof  
 INVENTOR(S): Sherman, Audrey A.; Mazurek, Mieczyslaw H.; Romanko, Walter R.; Hyde, Patrick D.; Wong, Roy; Everaerts, Albert I.  
 PATENT ASSIGNEE(S): Minnesota Mining and Manufacturing Co., USA  
 SOURCE: PCT Int. Appl., 67 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9817726	A1	19980430	WO 1997-US17200	19970925
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, FI, GB, GE, GH, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW				
RW: GH, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
US 6846893	B1	20050125	US 1996-735836	19961023
CA 2268113	A1	19980430	CA 1997-2268113	19970925
AU 9745010	A	19980515	AU 1997-45010	19970925
EP 934360	A1	19990811	EP 1997-943568	19970925
EP 934360	B1	20051123		
R: DE, ES, FR, GB, IT, NL				
BR 9712551	A	19991019	BR 1997-12551	19970925
CN 1234051	A	19991103	CN 1997-199049	19970925
JP 2001508818	T	20010703	JP 1998-519366	19970925
ES 2251033	T3	20060416	ES 1997-943568	19970925
MX 9903661	A	20000131	MX 1999-3661	19990420
KR 2000052713	A	20000825	KR 1999-703511	19990422
PRIORITY APPLN. INFO.:			US 1996-735836	A 19961023
			WO 1997-US17200	W 19970925

ED Entered STN: 11 May 1998

AB Title mixts. comprise (a) an elastomeric thermoplastic, nonelastomeric thermoplastic, or elastomeric thermoset or mixts. thereof, excluding polydiorganosiloxane fluids and (b) a polymer having soft polydiorganosiloxane units, hard polyisocyanate residue units, optionally, soft and/or hard organic polyamine residue units and terminal groups. The hard polyisocyanate residue and the hard polyamine residue comprise less than 50 weight% of the polydiorganosiloxane urea-containing component. The polyisocyanate residue is the polyisocyanate minus the -NCO groups and the polyamine residue is the polyamine minus the -NH<sub>2</sub> groups. The polyisocyanate residue is connected to the polyamine residue by urea linkages. The mixts. are useful for plastics, release surfaces, adhesives, transdermal drug delivery tapes, vibration damping compns., etc.

IC ICM C08L083-10

ICS C09J183-10; C09D183-10

CC 37-6 (Plastics Manufacture and Processing)

Section cross-reference(s): 38, 63

IT Styrene-butadiene rubber, uses  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (Synpol 1011A; polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

IT Isoprene-styrene rubber  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (block, triblock, Kraton 1107; polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

IT 105729-79-1 700836-36-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (isoprene-styrene rubber, block, triblock, Kraton 1107; polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

for  
 IT 105729-79-1D, block  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (isoprene-styrene rubber, triblock, Kraton 1107; polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

IT 207115-96-6P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymer mixts. containing polydiorganosiloxane urea-containing components and their manufacture and use)

IT 9017-68-9, Acrylic acid-isoctyl acrylate copolymer 26221-73-8  
 207240-14-0, HL 2542X 207294-25-5  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

IT 9003-55-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, Synpol 1011A; polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

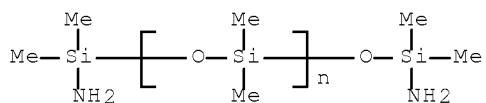
IT 207115-96-6P  
 RL: IMF (Industrial manufacture); POF (Polymer in formulation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (polymer mixts. containing polydiorganosiloxane urea-containing components and their manufacture and use)

RN 207115-96-6 HCPLUS

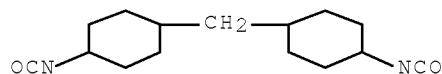
CN Poly[oxy(dimethylsilylene)],  $\alpha$ -(aminodimethylsilyl)- $\omega$ -[(aminodimethylsilyl)oxy]-, polymer with 1,1'-methylenebis[4-isocyanatocyclohexane], block (9CI) (CA INDEX NAME)

CM 1

CRN 163002-36-6  
 CMF (C<sub>2</sub> H<sub>6</sub> O Si)<sub>n</sub> C<sub>4</sub> H<sub>16</sub> N<sub>2</sub> O Si<sub>2</sub>  
 CCI PMS



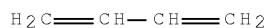
CM 2

CRN 5124-30-1  
CMF C15 H22 N2 O2

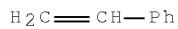
IT 9003-55-8  
 RL: POF (Polymer in formulation); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, Synpol 1011A; polymer mixts. containing polydiorganosiloxane urea-containing components for adhesives)

RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6

CM 2

CRN 100-42-5  
CMF C8 H8

REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 17 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:782020 HCPLUS Full-text  
 DOCUMENT NUMBER: 130:73817  
 TITLE: Reproducible receptor paper for thermal-transfer  
 printing or electrophotography  
 INVENTOR(S): Kobayashi, Tomoo; Torigoe, Kaoru; Ezure, Hirakazu  
 PATENT ASSIGNEE(S): Fuji Xerox Co., Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10319620	A	19981204	JP 1997-132617	19970522
JP 3690063	B2	20050831		

PRIORITY APPLN. INFO.: JP 1997-132617 19970522

ED Entered STN: 14 Dec 1998

AB The paper has a filler-containing resin coating layer and a release layer on the former, where the release layer contains a reactive silane compound and a modified silicone oil having a reactive group in mol. The filler may be an inorg. material such as kaolin, TiO<sub>2</sub>, MgCO<sub>3</sub>, SiO<sub>2</sub>, Al<sub>2</sub>O<sub>3</sub>, or CaCO<sub>3</sub>. The paper show excellent durability in repeated printing and toner removal.

IC ICM G03G007-00

ICS G03G007-00; B41J002-32; G03G021-00

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 43

IT Styrene-butadiene rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (JSR 061, ink-receiving layer; reproducible receptor sheet for thermal-transfer printing or electrophotog.)

IT Styrene-butadiene rubber, uses

RL: TEM (Technical or engineered material use); USES (Uses)  
 (carboxy-containing, JSR 0668, ink-receiving layer; reproducible receptor sheet for thermal-transfer printing or electrophotog.)

IT 681-84-5DP, Tetramethoxysilane, reaction products with hydroxy-containing dimethylpolysiloxane and reactive silanes 2031-67-6DP,

Methyltriethoxysilane, reaction products with polysiloxanes and reactive silanes 2530-85-0P 2550-04-1DP, Allyltriethoxysilane, reaction

products with polysiloxanes and reactive silanes 2768-02-7DP,

Trimethoxyvinylsilane, reaction products with tetraisocyanatosilane and amino-containing polysiloxane 3410-77-3DP, Tetraisocyanatosilane, reaction products with amino-containing polysiloxanes 5587-61-1DP,

Methyltriisocyanatosilane, reaction product with Me Ph polysiloxane and reactive silanes 16415-13-7DP, Hexadecyltriethoxysilane, reaction

products with polysiloxanes and reactive silanes 16881-77-9DP, Methyldimethoxysilane, reaction product with Me Ph polysiloxane and reactive silanes 18536-91-9DP, Dodecyltriethoxysilane, reaction product

with Me Ph polysiloxane and reactive silanes 26403-67-8DP, KF 99, reaction products with polysiloxanes and reactive silanes 102116-01-8DP,

reaction products with hydroxy-containing dimethylpolysiloxane and reactive silanes 136135-22-3DP, reaction products with hydroxy-containing dimethylpolysiloxane and reactive silanes 218129-67-0P

218129-68-1P 218129-69-2P

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(release layer; reproducible receptor sheet for thermal-transfer

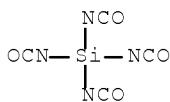
printing or electrophotog.)

IT 9003-55-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
(styrene-butadiene rubber, JSR 061, ink-receiving  
 layer; reproducible receptor sheet for thermal-transfer printing or  
 electrophotog.)

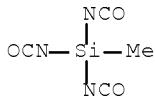
IT 9003-55-8  
 RL: TEM (Technical or engineered material use); USES (Uses)  
(styrene-butadiene rubber, carboxy-containing, JSR  
 0668, ink-receiving layer; reproducible receptor sheet for  
 thermal-transfer printing or electrophotog.)

IT 3410-77-3DP, Tetraisocyanatosilane, reaction products with  
 amino-containing polysiloxanes 5587-61-1DP,  
 Methyltriisocyanatosilane, reaction product with Me Ph polysiloxane and  
 reactive silanes 218129-67-0P 218129-69-2P  
 RL: PNU (Preparation, unclassified); TEM (Technical or engineered material  
 use); PREP (Preparation); USES (Uses)  
 (release layer; reproducible receptor sheet for thermal-transfer  
 printing or electrophotog.)

RN 3410-77-3 HCAPLUS  
 CN Silane, tetraisocyanato- (CA INDEX NAME)



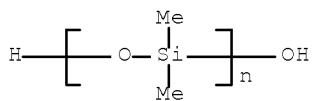
RN 5587-61-1 HCAPLUS  
 CN Silane, triisocyanatomethyl- (CA INDEX NAME)



RN 218129-67-0 HCAPLUS  
 CN Silane, triisocyanatomethyl-, polymer with  
 $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(dimethylsilylene)] and  
 triisocyanatophenylsilane (9CI) (CA INDEX NAME)

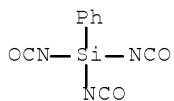
CM 1

CRN 31692-79-2  
 CMF  $(\text{C}_2\text{H}_6\text{O}\text{Si})_n\text{H}_2\text{O}$   
 CCI PMS



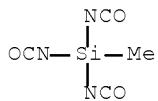
CM 2

CRN 17883-47-5  
 CMF C9 H5 N3 O3 Si



CM 3

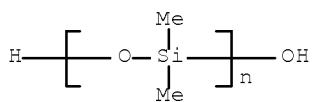
CRN 5587-61-1  
 CMF C4 H3 N3 O3 Si



RN 218129-69-2 HCPLUS  
 CN Silane, tetraisocyanato-, polymer with  
 $\alpha$ -hydro- $\omega$ -hydroxypoly[oxy(dimethylsilylene)],  
 trimethoxymethylsilane and  $\alpha$ -(trimethylsilyl)- $\omega$ -  
 [(trimethylsilyl)oxy]poly[oxy(methylsilylene)] (9CI) (CA INDEX NAME)

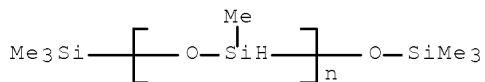
CM 1

CRN 31692-79-2  
 CMF (C<sub>2</sub> H<sub>6</sub> O Si)<sub>n</sub> H<sub>2</sub> O  
 CCI PMS



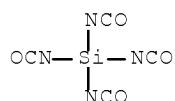
CM 2

CRN 26403-67-8  
 CMF (C H4 O Si)n C6 H18 O Si2  
 CCI PMS



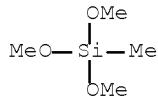
CM 3

CRN 3410-77-3  
 CMF C4 N4 O4 Si



CM 4

CRN 1185-55-3  
 CMF C4 H12 O3 Si

IT 9003-55-8

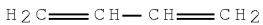
RL: TEM (Technical or engineered material use); USES (Uses)  
(styrene-butadiene rubber, JSR 061, ink-receiving  
 layer; reproducible receptor sheet for thermal-transfer printing or  
 electrophotog.)

RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

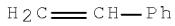
CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8



RL: TEM (Technical or engineered material use); USES (Uses)  
(styrene-butadiene rubber, carboxy-contg., JSR  
 0668, ink-receiving layer; reproducible receptor sheet for  
 thermal-transfer printing or electrophotog.

L81 ANSWER 18 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:211160 HCPLUS Full-text  
 DOCUMENT NUMBER: 128:308607  
 ORIGINAL REFERENCE NO.: 128:61173a,61176a  
 TITLE: Purification of styrylsilanes by distillation in  
 presence of hindered phenols and/or aromatic diamines  
 INVENTOR(S): Tsuchiya, Katsuyoshi; Yoshimatsu, Shunji; Kizaki,  
 Yoichi  
 PATENT ASSIGNEE(S): Chisso Corp., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 10087670	A	19980407	JP 1996-268016	19960918
PRIORITY APPLN. INFO.:			JP 1996-268016	19960918
OTHER SOURCE(S):	MARPAT	128:308607		
ED Entered STN: 15 Apr 1998				
AB	H <sub>2</sub> C:CR1C <sub>6</sub> H <sub>4</sub> SiR <sub>2</sub> nX <sub>3</sub> -n (R <sub>1</sub> = H, Me; R <sub>2</sub> = Me, Et; X = halo; n = 0-2), useful as materials for silane coupling agents, polysiloxanes, etc., are purified by distillation in the presence of hindered phenols and/or aromatic diamines as polymerization inhibitors. Crude p-styryldimethylchlorosilane was distilled in the presence of 200 ppm 2,6-di-tert-butyl-4-methoxyphenol to show no gelation for 26 h.			
IC	ICM C07F007-12			
CC	29-6 (Organometallic and Organometalloidal Compounds)			
	Section cross-reference(s): 35			
IT	<u>Amines, uses</u> RL: NUU (Other use, unclassified); USES (Uses) <u>(diamines, aromatic, polymerization inhibitors; purification of styrylsilanes by distillation in presence of hindered phenols and/or aromatic diamines)</u>			
IT	Distillation			

Polymerization inhibitors

(purification of styrylsilanes by distillation in presence of hindered phenols  
and/or aromatic diamines)

L81 ANSWER 19 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1998:52166 HCPLUS Full-text  
 DOCUMENT NUMBER: 128:89886  
 ORIGINAL REFERENCE NO.: 128:17551a,17554a  
 TITLE: Thermally Stable Silphenylene Vinyl Siloxane Elastomers and Their Blends  
 AUTHOR(S): Zhu, H. Dennis; Kantor, Simon W.; MacKnight, William J.  
 CORPORATE SOURCE: Department of Polymer Science and Engineering,  
 University of Massachusetts, Amherst, MA, 01003-4530,  
 USA  
 SOURCE: Macromolecules (1998), 31(3), 850-856  
 CODEN: MAMOBX; ISSN: 0024-9297  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 ED Entered STN: 29 Jan 1998  
 AB Vinyl-substituted silphenylene siloxane elastomers (VSPSEs) with variable vinyl content were synthesized using the disilanol-diaminosilane polycondensation method. High-mol.-weight elastomers were obtained by using carefully purified monomers. The polymers were characterized by gel permeation chromatog., differential scanning calorimetry (DSC), and thermogravimetric analyses (TGA). Anal. by  $^{29}\text{Si}$  NMR established that the samples have exactly alternating chemical structures. VSPSEs have low glass transition temps. ( $T_g$ 's) ranging from -26 to -63 °C. Substitution of the Me group on silicon with Ph increases the  $T_g$  as well as the TGA residues in both air and nitrogen. TGA expts. showed that the VSPSEs synthesized in this study have the highest degradation temps. reported so far. The TGA residues at 900 °C increased to 70% in nitrogen and 57% in air as the vinyl content increased. Furthermore, remarkable isothermal weight losses were shown by the VSPSEs. For example, the elastomer with one vinyl group per repeating unit had a weight loss of 0.7% in nitrogen and 3% in air after 5 h at 400 °C. Blends of VSPSEs with conventional styrene-butadiene rubbers (SBR) and also with styrene-butadiene-styrene triblock copolymers (SBS) were prepared using solution blending. DSC studies indicated that these blends were not miscible. Crosslinking the blends broadened the  $T_g$ s for the blend constituents indicating a small degree of interfacial phase mixing. Thermal-oxidative stability of the blends is intermediate between that of the VSPSEs and the SBR or SBS.  
 CC 39-4 (Synthetic Elastomers and Natural Rubber)  
 Section cross-reference(s): 35  
 IT Styrene-butadiene rubber, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (blends with silicone rubber; preparation and characterization of thermally stable silphenylene vinyl siloxane elastomers and blends)  
 IT Styrene-butadiene rubber, preparation  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (block, triblock, blends with silicone rubber; preparation and characterization of thermally stable silphenylene vinyl siloxane elastomers and blends)  
 IT 34056-57-0P, 1,4-Bis(hydroxydimethylsilyl)benzene-bis(dimethylamino)dimethylsilane copolymer 41205-84-9P  
 52224-67-6P, 1,4-Bis(hydroxydimethylsilyl)benzene-bis(dimethylamino)methylphenylsilane copolymer 81523-67-3P  
 119727-09-2P, 1,4-Bis(hydroxydimethylsilyl)benzene-

bis(dimethylamino)methylvinylsilane copolymer  
134970-80-2P, 1,4-Bis(hydroxydimethylsilyl)benzene-  
bis(dimethylamino)dimethylsilane-bis(dimethylamino)methylvinylsilane  
copolymer 200932-79-2P,  
1,4-Bis(hydroxydimethylsilyl)benzene-bis(dimethylamino)dimethylsilane-  
bis(dimethylamino)methylphenylsilane-bis(dimethylamino)methylvinylsilane  
copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(rubber; preparation and characterization of thermally stable silphenylene  
vinyl siloxane elastomers and blends)

IT 9003-55-8P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(styrene-butadiene rubber, blends with silicone  
rubber; preparation and characterization of thermally stable silphenylene  
vinyl siloxane elastomers and blends)

IT 106107-54-4P 694491-73-1P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(styrene-butadiene rubber, block, triblock, blends  
with silicone rubber; preparation and characterization of thermally stable  
silphenylene vinyl siloxane elastomers and blends)

IT 34056-57-0P, 1,4-Bis(hydroxydimethylsilyl)benzene-  
bis(dimethylamino)dimethylsilane copolymer 52224-67-6P  
, 1,4-Bis(hydroxydimethylsilyl)benzene-  
bis(dimethylamino)methylphenylsilane copolymer  
119727-09-2P, 1,4-Bis(hydroxydimethylsilyl)benzene-  
bis(dimethylamino)methylvinylsilane copolymer  
134970-80-2P, 1,4-Bis(hydroxydimethylsilyl)benzene-  
bis(dimethylamino)dimethylsilane-bis(dimethylamino)methylvinylsilane  
copolymer 200932-79-2P,  
1,4-Bis(hydroxydimethylsilyl)benzene-bis(dimethylamino)dimethylsilane-  
bis(dimethylamino)methylphenylsilane-bis(dimethylamino)methylvinylsilane  
copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(rubber; preparation and characterization of thermally stable silphenylene  
vinyl siloxane elastomers and blends)

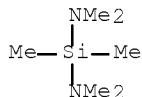
RN 34056-57-0 HCPLUS

CN Silanol, 1,4-phenylenebis(dimethyl-, polymer with hexamethylsilanediamine  
(9CI) (CA INDEX NAME)

CM 1

CRN 3768-58-9

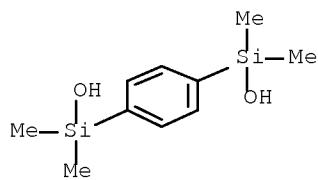
CMF C6 H18 N2 Si



CM 2

CRN 2754-32-7

CMF C10 H18 O2 Si2



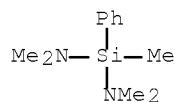
RN 52224-67-6 HCPLUS

CN Silanol, 1,4-phenylenebis[dimethyl-, polymer with  
N,N,N',N',1-pentamethyl-1-phenylsilanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 33567-83-8

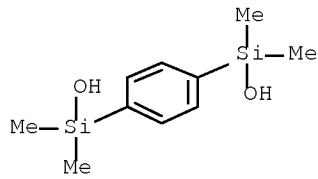
CMF C11 H20 N2 Si



CM 2

CRN 2754-32-7

CMF C10 H18 O2 Si2



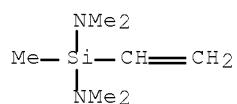
RN 119727-09-2 HCPLUS

CN Silanol, 1,4-phenylenebis[dimethyl-, polymer with  
1-ethenyl-N,N,N',N',1-pentamethylsilanediamine (9CI) (CA INDEX NAME)

CM 1

CRN 13368-45-1

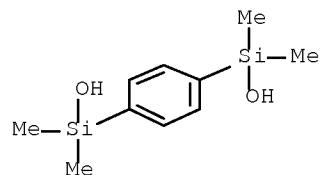
CMF C7 H18 N2 Si



CM 2

CRN 2754-32-7

CMF C10 H18 O2 Si2



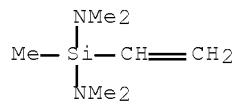
RN 134970-80-2 HCPLUS

CN Silanol, 1,4-phenylenebis[dimethyl-, polymer with  
1-ethenyl-N,N,N',N',1-pentamethylsilanediame and hexamethylsilanediame  
(9CI) (CA INDEX NAME)

CM 1

CRN 13368-45-1

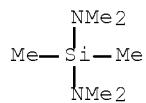
CMF C7 H18 N2 Si



CM 2

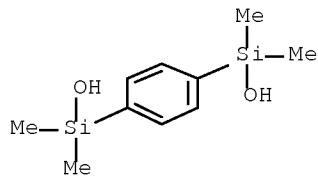
CRN 3768-58-9

CMF C6 H18 N2 Si



CM 3

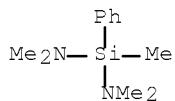
CRN 2754-32-7  
 CMF C10 H18 O2 Si2



RN 200932-79-2 HCPLUS  
 CN Silanol, 1,4-phenylenebis[dimethyl-, polymer with  
 1-ethenyl-N,N,N',N',1-pentamethylsilanediamine, hexamethylsilanediamine  
 and N,N,N',N',1-pentamethyl-1-phenylsilanediamine (9CI) (CA INDEX NAME)

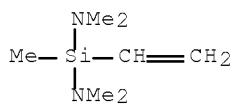
CM 1

CRN 33567-83-8  
 CMF C11 H20 N2 Si



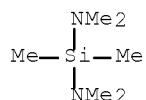
CM 2

CRN 13368-45-1  
 CMF C7 H18 N2 Si

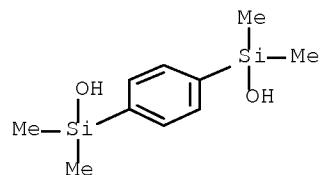


CM 3

CRN 3768-58-9  
 CMF C6 H18 N2 Si



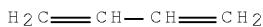
CM 4

CRN 2754-32-7  
CMF C10 H18 O2 Si2

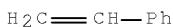
IT 9003-55-8P  
 RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
 (styrene-butadiene rubber, blends with silicone  
 rubber; preparation and characterization of thermally stable silphenylene  
 vinyl siloxane elastomers and blends)

RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6

CM 2

CRN 100-42-5  
CMF C8 H8

REFERENCE COUNT: 12 THERE ARE 12 CITED REFERENCES AVAILABLE FOR THIS  
 RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L81 ANSWER 20 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1997:668134 HCPLUS Full-text  
 DOCUMENT NUMBER: 127:279440  
 ORIGINAL REFERENCE NO.: 127:54563a,54566a  
 TITLE: Silica-reinforced rubber composition and tire with tread  
 INVENTOR(S): Cohen, Martin Paul; Lawrence, John Pennington; Losey, Cheryl Ann  
 PATENT ASSIGNEE(S): Goodyear Tire and Rubber Co., USA  
 SOURCE: Eur. Pat. Appl., 11 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 796891	A1	19970924	EP 1997-104026	19970311
R: DE, FR, GB, IT				
US 5719207	A	19980217	US 1996-617245	19960318
CA 2181428	A1	19970919	CA 1996-2181428	19960717
BR 9701321	A	19981110	BR 1997-1321	19970317
JP 10025368	A	19980127	JP 1997-64890	19970318
PRIORITY APPLN. INFO.:			US 1996-617245	A 19960318

OTHER SOURCE(S): MARPAT 127:279440

ED Entered STN: 22 Oct 1997

- AB The title composition comprises  $\geq 1$  elastomer, silica, a silica coupler, a silylating agent and, optionally, carbon black. Thus, a sample prepared from composition containing styrene-butadiene copolymer rubber 25, isoprene-butadiene copolymer rubber 45, Budene-1254 20, natural rubber 10, processing oils and waxes 24.9, ZnO 2.5, fatty acid 3, antioxidants 3, Z 1165MP 80, X 50S (coupling agent) 12.8, N,N'-bis(trimethylsilyl)urea (I) 3, S 1.4 and accelerators 3.7 phr had 300% modulus 11.7 MPa, rebound (100°) 62, abrasion resistance (relative weight loss) 104, and viscosity uncured (Mooney 1+1.5, 100°) 52 (productive mixed elastomer composition), vs. 10.1, 60, 108 and 55 for similar composition without I.
- IC ICM C08K005-54  
 ICS C08L021-00; B60C001-00
- CC 39-13 (Synthetic Elastomers and Natural Rubber)
- ST silica reinforced rubber compd tire tread; urea bistrimethylsilyl silylation agent tire rubber; SBR compd silica reinforced tire tread; isoprene butadiene rubber compd tire tread
- IT Synthetic rubber, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (butadiene-isoprene; silica reinforced rubber composition and tire with tread)
- IT Butadiene rubber, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (of cis-1,4-configuration, Budene 1254; silica reinforced rubber composition and tire with tread)
- IT Natural rubber, properties  
Styrene-butadiene rubber, properties  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (silica reinforced rubber composition and tire with tread)
- IT 18297-63-7, N,N'-Bis(trimethylsilyl)urea

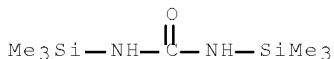
RL: MOA (Modifier or additive use); USES (Uses)  
 (silylating agent; silica reinforced rubber composition and tire with tread)

IT 9003-55-8  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, silica reinforced rubber composition and tire with tread)

IT 9003-17-2  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (cis-1,4-Butadiene rubber, Budene 1254; silica reinforced rubber composition and tire with tread)

IT 18297-63-7, N,N'-Bis(trimethylsilyl)urea  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (silylating agent; silica reinforced rubber composition and tire with tread)

RN 18297-63-7 HCPLUS  
 CN Urea, N,N'-bis(trimethylsilyl)- (CA INDEX NAME)

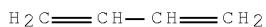


IT 9003-55-8  
 RL: POF (Polymer in formulation); PRP (Properties); TEM (Technical or engineered material use); USES (Uses)  
 (styrene-butadiene rubber, silica reinforced rubber composition and tire with tread)

RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

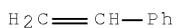
CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8



L81 ANSWER 21 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1994:219527 HCPLUS Full-text  
 DOCUMENT NUMBER: 120:219527  
 ORIGINAL REFERENCE NO.: 120:38997a,39000a  
 TITLE: Thermochromic polymer compositions  
 INVENTOR(S): Kuwano, Atsushi; Watanabe, Itsuo; Taketazu, Jun;  
 Yamada, Mitsuo  
 PATENT ASSIGNEE(S): Hitachi Chemical Co Ltd, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 3  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05239266	A	19930917	JP 1992-38283	19920226
EP 527454	B1	20011107	EP 1992-113524	19920807
R: DE, FR, GB				
PRIORITY APPLN. INFO.:			JP 1991-198174	A 19910808
			JP 1991-198175	A 19910808
			JP 1991-345072	A 19911226
			JP 1992-38283	A 19920226
			JP 1992-96929	A 19920417
			JP 1992-103402	A 19920423

OTHER SOURCE(S): MARPAT 120:219527

ED Entered STN: 30 Apr 1994

AB The title compns. with high solvent-solubility contain polymers obtained from diene monomers and/or aromatic vinyl monomers and tetraazaporphyrins containing central metals having 2 substituents. Thus, a mixture of 10 parts cis-polybutadiene and 1 part bis(tributylsiloxy)silicon tetrakis(decylthio)naphthalocyanine in 490 parts MePh was spin-coated on a glass plate to obtain a 400-nm film showing maximum absorbance at 790 nm (30°) and 830 nm (100°).

IC ICM C08L009-00

ICS C08K005-3475; C08L047-00

CC 37-6 (Plastics Manufacture and Processing)  
 Section cross-reference(s): 74

ST thermochromic vinyl polymer film; butylsiloxy silicon decylthio naphthalocyanine vinyl polymer film; diene polymer film thermochromic; azaporphyrin vinyl polymer film thermochromic; butadiene polymer film thermochromic

IT Rubber, butadiene-styrene, miscellaneous

RL: MSC (Miscellaneous)  
 (films, containing tetraazaporphyrins, with thermochromic properties,  
 Tufprene)

IT 122342-78-3, Bis(tributylsiloxy)silicon

tetrakis(decylthio)naphthalocyanine 122342-93-2,

Bis(triethylsiloxy)silicon tetrakis(decylthio)naphthalocyanine

RL: USES (Uses)

(diene polymer or vinyl polymer films containing, with thermochromic properties)

IT 9003-53-6, Polystyrene

RL: USES (Uses)

(films, containing tetraazaporphyrins, with thermochromic properties)

IT 9003-55-8

RL: USES (Uses)

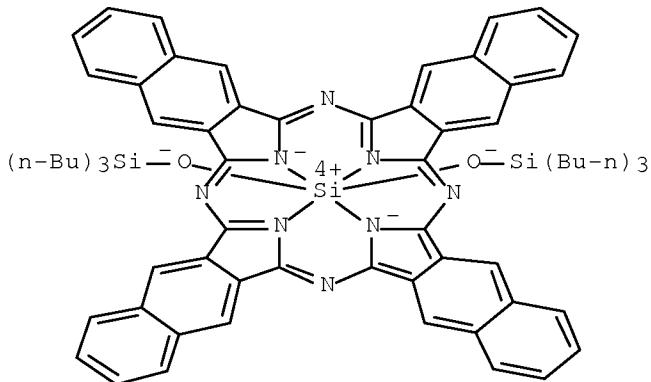
(rubber, films, containing tetraazaporphyrins, with thermochromic properties, Tufprene)

IT 122342-78-3, Bis(tributylsiloxy)silicon tetrakis(decylthio)naphthalocyanine 122342-93-2,  
 Bis(triethylsiloxy)silicon tetrakis(decylthio)naphthalocyanine  
 RL: USES (Uses)  
 (diene polymer or vinyl polymer films containing, with thermochromic properties)

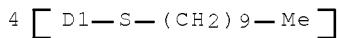
RN 122342-78-3 HCAPLUS

CN Silicon, [C,C,C,C-tetrakis(decylthio)-37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-1:2''',3'''-q]porphyrazinato(2-)-κN37,κN38,κN39,κN40]bis(tributylsilanolato)- (9CI)  
 (CA INDEX NAME)

PAGE 1-A

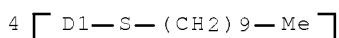
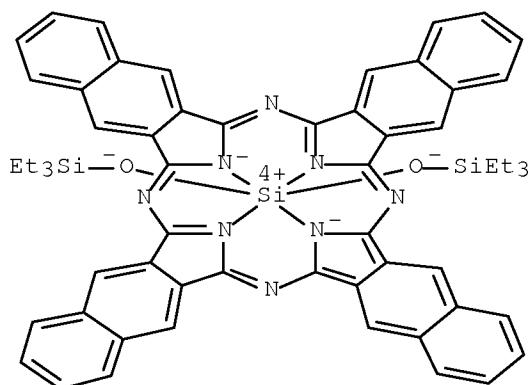


PAGE 2-A



RN 122342-93-2 HCAPLUS

CN Silicon, [C,C,C,C-tetrakis(decylthio)-37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-1:2''',3'''-q]porphyrazinato(2-)-κN37,κN38,κN39,κN40]bis(triethylsilylalato)- (9CI)  
 (CA INDEX NAME)

IT 9003-55-8

RL: USES (Uses)

(rubber, films, containing tetraazaporphyrins, with thermochromic properties, Tufprene)

RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

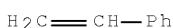
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



DOCUMENT NUMBER: 117:235655  
 ORIGINAL REFERENCE NO.: 117:40759a, 40762a  
 TITLE: Durable joint sheets with no seizing on contact surfaces  
 INVENTOR(S): Sano, Ryoichi; Nakano, Kenji  
 PATENT ASSIGNEE(S): Nippon Valqua Industries Ltd., Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 04139234	A	19920513	JP 1990-261270	19900928
PRIORITY APPLN. INFO.:			JP 1990-261270	19900928

ED Entered STN: 13 Dec 1992

AB The title sheets comprise fibers and rubbers with at least a portion of the active H on the sheet surface being substituted by Si-containing groups. A 1.5 mm-thick sheet comprising SBR 15, S-ZnO 5, aramid 15, wollastonite 30, and clay-talc 35% was immersed in an EtOAc solution of 3:3:4 butoxysilyl triisocyanate-tetraisocyanatosilane-triethylsilyl isocyanate for 10 s to give a joint sheet.

IC ICM C08J007-12

ICS C08J007-04

CC 39-15 (Synthetic Elastomers and Natural Rubber)

IT Rubber, butadiene-styrene, uses

Rubber, nitrile, uses

RL: USES (Uses)

(aramid-containing joint sheets, silane-treated, durable, seizing-resistant)

IT 3410-77-3, Tetraisocyanatosilane 18296-10-1 89548-85-6

RL: USES (Uses)

(aramid-rubber joint sheets treated with, durable, seizing-resistant)

IT 9003-18-3 9003-55-8

RL: USES (Uses)

(rubber, aramid-containing joint sheets, silane-treated, durable, seizing-resistant)

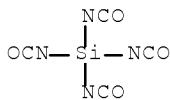
IT 3410-77-3, Tetraisocyanatosilane 89548-85-6

RL: USES (Uses)

(aramid-rubber joint sheets treated with, durable, seizing-resistant)

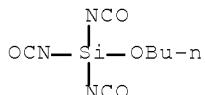
RN 3410-77-3 HCPLUS

CN Silane, tetraisocyanato- (CA INDEX NAME)



RN 89548-85-6 HCPLUS

CN Silane, butoxytriisocyanato- (CA INDEX NAME)

IT 9003-55-8

RL: USES (Uses)

(rubber, aramid-containing joint sheets, silane-treated, durable, seizing-resistant)

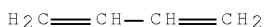
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

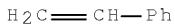
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



L81 ANSWER 23 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1991:52968 HCPLUS Full-text

DOCUMENT NUMBER: 114:52968

ORIGINAL REFERENCE NO.: 114:8961a, 8964a

TITLE: Erasable organic optical recording medium and reversible optical recording and erasing

INVENTOR(S): Omichi, Takahiro; Kawaguchi, Takeyuki

PATENT ASSIGNEE(S): Teijin Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 02187390	A	19900723	JP 1989-5889	19890117
PRIORITY APPLN. INFO.:			JP 1989-5889	19890117
ED Entered STN: 09 Feb 1991				

AB The title medium comprises a reversible organic medium having resineous state at low temperature and rubber state at high temperature and a colorant with high reflection property, in which, information is recorded by irradiation of strong laser beam at the absorption wavelength of the colorant to form a bump in rapid heating and cooling and the record is erased by irradiation of weak laser beam to reduce the bump by transformation of the resin into rubber state in slow heating and cooling. Thus, a composition comprising Asmer (SBR resin), NIR 12 (V phthalocyanine dye), and toluene was applied onto a glass support and dried to give a coating, which was irradiated by 830-nm laser at 10 mW to create a bump and irradiated by the laser beam at 7 mW to reduce the bump.

IC ICM B41M005-26  
ICS G11B007-00; G11B007-24

CC 74-12 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

ST erasable org optical recording medium; laser irradn org recording material; SBR rubber reversible optical recording material; ~~butadiene styrene copolymer~~ optical recording; vanadium phthalocyanine erasable recording material

IT 13930-88-6 131152-43-7, Bis(3-methacryloyloxypropylenedimethylsiloxy)siliconaphthalocyanine  
RL: USES (Uses)  
(colorant, for erasable optical recording material from resin)

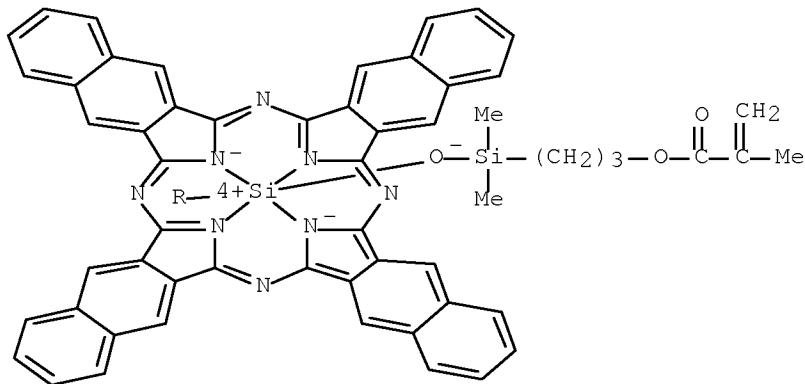
IT 9003-55-8, Butadiene-styrene copolymer  
RL: USES (Uses)  
(shape-memory, Asmer, for erasable optical recording material, laser-absorbing colorant in)

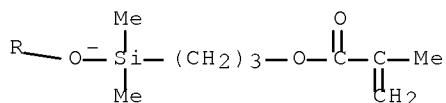
IT 131152-43-7, Bis(3-methacryloyloxypropylenedimethylsiloxy)siliconaphthalocyanine  
RL: USES (Uses)  
(colorant, for erasable optical recording material from resin)

RN 131152-43-7 HCPLUS

CN Silicon, bis[3-(hydroxydimethylsilyl)propyl 2-methyl-2-propenoato] [37H,39H-tetranaphtho[2,3-b:2',3'-g:2'',3''-1:2''',3'''-q]porphyrizinato(2--)-N37,N38,N39,N40]-, (OC-6-12)-(9CI) (CA INDEX NAME)

PAGE 1-A



IT 9003-55-8, Butadiene-styrene copolymer

RL: USES (Uses)

(shape-memory, Asmer, for erasable optical recording material,  
laser-absorbing colorant in)

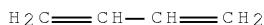
RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0

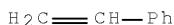
CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



L81 ANSWER 24 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1990:141430 HCPLUS Full-text

DOCUMENT NUMBER: 112:141430

ORIGINAL REFERENCE NO.: 112:23889a,23892a

TITLE: Surface-treating agents for polymer articles

INVENTOR(S): Fukawa, Michihiro; Yasukawa, Mitsutoshi

PATENT ASSIGNEE(S): Shinko Giken K. K., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 6 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

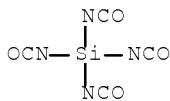
LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

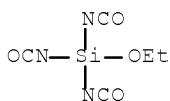
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 01141909	A	19890602	JP 1987-299708	19871130
JP 2631113	B2	19970716		
PRIORITY APPLN. INFO.:			JP 1987-299708	19871130

ED    Entered STN: 13 Apr 1990  
 AB    The agents, storage-stable and applicable with good adhesion to rubbers and plastics for surface lubricity and release effect without blooming, comprise 1-95% silyl isocyanates and 1-80% curable polyesters. Thus, a 20 volume% solution of a polyester in 1:1 MEK-toluene and a 10 volume% EtOAc solution of a 1:1:1 EtOSi(NCO)3-Si(NCO)4-Me3SiNCO mixture were mixed 3:5 to give a coating, which was stable for 60 days. A nitrile rubber sheet dipped in the coating for 30 s and dried at room temperature for 2 h showed good adhesion and lubricity and no bleeding.  
 IC    ICM C08G018-42  
 ICA    C08L075-04  
 CC    42-10 (Coatings, Inks, and Related Products)  
       Section cross-reference(s): 38, 39  
 IT    Polymers, uses and miscellaneous  
       Rubber, butadiene-styrene, uses and miscellaneous  
       Rubber, butyl, uses and miscellaneous  
       Rubber, neoprene, uses and miscellaneous  
       Rubber, nitrile, uses and miscellaneous  
       RL: USES (Uses)  
           (coatings for, mixts. of curable polyesters and silyl isocyanates as, for lubricity and release properties)  
 IT    1118-02-1, Trimethylsilyl isocyanate 3410-77-3,  
       Tetraisocyanatosilane 18243-45-3  
       RL: USES (Uses)  
           (mixts. with curable polyesters, coatings, storage-stable, for rubbers and plastics, for lubricity and release properties)  
 IT    9003-18-3 9003-55-8    9010-85-9    9010-98-4  
       RL: USES (Uses)  
           (rubber, coatings for, mixts. of curable polyesters and silyl isocyanates as, for lubricity and release properties)  
 IT    3410-77-3, Tetraisocyanatosilane 18243-45-3  
       RL: USES (Uses)  
           (mixts. with curable polyesters, coatings, storage-stable, for rubbers and plastics, for lubricity and release properties)  
 RN    3410-77-3    HCPLUS  
 CN    Silane, tetraisocyanato- (CA INDEX NAME)



RN    18243-45-3    HCPLUS  
 CN    Silane, ethoxytriisocyanato- (CA INDEX NAME)

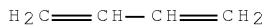


IT    9003-55-8

RL: USES (Uses)  
 (rubber, coatings for, mixts. of curable polyesters and silyl  
 isocyanates as, for lubricity and release properties)  
 RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

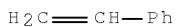
CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8



L81 ANSWER 25 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1990:236721 HCPLUS Full-text  
 DOCUMENT NUMBER: 112:236721  
 ORIGINAL REFERENCE NO.: 112:39935a,39938a  
 TITLE: Modification of diene rubbers using organosilicon or  
 organotin halides and organic nitrogen- or  
 phosphorus-containing compounds  
 INVENTOR(S): Imai, Akio; Seki, Tomoaki; Yamamoto, Keisaku  
 PATENT ASSIGNEE(S): Sumitomo Chemical Co., Ltd., Japan  
 SOURCE: Eur. Pat. Appl., 28 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 341496	A2	19891115	EP 1989-107577	19890426
EP 341496	A3	19900328		
EP 341496	B1	19931020		
R: DE, FR, GB, IT, NL				
JP 01278501	A	19891108	JP 1988-109454	19880502
JP 01284502	A	19891115	JP 1988-114468	19880510
JP 01284503	A	19891115	JP 1988-114469	19880510
JP 01284504	A	19891115	JP 1988-115372	19880512
JP 01284505	A	19891115	JP 1988-115373	19880512
CA 1338805	C	19961217	CA 1989-597880	19890426
US 5128416	A	19920707	US 1990-581163	19900905
US 5219938	A	19930615	US 1992-848095	19920309

## PRIORITY APPLN. INFO.:

JP	1988-109454	A	19880502
JP	1988-114468	A	19880510
JP	1988-114469	A	19880510
JP	1988-115372	A	19880512
JP	1988-115373	A	19880512
US	1989-343558	B1	19890427
US	1990-581163	A3	19900905

ED Entered STN: 23 Jun 1990

AB Modified diene rubbers, having increased impact resilience, reduced low-temperature hardness, and improved processability, and useful for tires and other industries, are manufactured by reacting a living diene polymer with (A) RAMXb (R = alkyl, alkenyl, cycloalkenyl, or aryl; M = Si or Sn; X = halogen; a = 0-2; and b = 2-4; and (B) ≥1 of a nitro compound, a phosphoryl chloride compound R1(R2NP(O)ClN(R3)R4 (R1, R2, R3, and R4 = alkyl), an aminoalkylsilane, an acrylamide derivative, and an aminovinylsilane derivative. Thus, 1000 g 1,3-butadiene solution in 4300 g hexane was polymerized under N in the presence of 40 mmol ethylene glycol di-Et ether and 6.0 mmol n-BuLi solution in hexane at 50° for 1 h. The reaction mixture was reacted with 0.75 mmol SiCl4 at 50° for 30 min, treated with 1.5 mmol p-chloronitrobenzene, stirred with MeOH, mixed with 2,6-di-tert-butyl-p-cresol, and dried under reduced pressure at 60°. The modified rubber had Mooney viscosity (ML1+4 100°) 81, compared with 77 for a similar rubber modified without SiCl4.

IC ICM C08C019-42

CC 39-4 (Synthetic Elastomers and Natural Rubber)

ST living polybutadiene reaction silicon chloride;  
butadiene rubber reaction chloronitrobenzene; nitro compd reaction  
diene rubber; tin compd reaction living polybutadiene

IT Rubber, butadiene, compounds

Rubber, butadiene-styrene, compounds

RL: IMF (Industrial manufacture); PREP (Preparation)

(reaction products, with silicon or tin compds. and organic nitrogen or phosphorus-containing compds., preparation of, with improved processability

and

phys. properties)

IT 76-06-2, Chloropicrin 100-00-5, p-Chloronitrobenzene 1605-65-8,  
Bis(dimethylamino)phosphoryl chloride 3845-76-9, N,N-Dimethylaminopropyl  
acrylamide 5292-45-5 13368-45-1,  
Bis(dimethylamino)methylvinylsilane 82925-57-3

RL: USES (Uses)

(diene rubbers terminated by, for improved processability and phys.  
properties)

IT 9003-17-2P 9003-55-8P

RL: IMF (Industrial manufacture); PREP (Preparation)

(rubber, reaction products, with silicon or tin compds. and organic  
nitrogen or phosphorus-containing compds., preparation of, with improved  
processability and phys. properties)

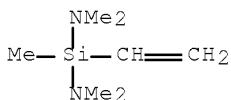
IT 13368-45-1, Bis(dimethylamino)methylvinylsilane

RL: USES (Uses)

(diene rubbers terminated by, for improved processability and phys.  
properties)

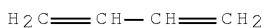
RN 13368-45-1 HCPLUS

CN Silanediamine, 1-ethenyl-N,N,N',N',1-pentamethyl- (CA INDEX NAME)

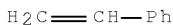


IT 9003-55-8P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (rubber, reaction products, with silicon or tin compds. and organic  
 nitrogen or phosphorus-containing compds., preparation of, with improved  
 processability and phys. properties)  
 RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6

CM 2

CRN 100-42-5  
CMF C8 H8

L81 ANSWER 26 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1984:611888 HCPLUS Full-text  
 DOCUMENT NUMBER: 101:211888  
 ORIGINAL REFERENCE NO.: 101:32127a,32130a  
 TITLE: Flocculation of latex particles and production of  
 thermoplastic resin  
 INVENTOR(S): Fujino, Kiyoharu  
 PATENT ASSIGNEE(S): Mitsubishi Monsanto Chemical Co. , Japan  
 SOURCE: Eur. Pat. Appl., 52 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 84837	A1	19830803	EP 1983-100366	19830117
EP 84837	B1	19890816		
R: BE, CH, DE, FR, GB, IT, LI, NL				
JP 58128112	A	19830730	JP 1982-10687	19820126
JP 03029812	B	19910425		
JP 58194907	A	19831114	JP 1982-76296	19820507
JP 01053882	B	19891116		
JP 59022905	A	19840206	JP 1982-133327	19820730

JP 02047482	B	19901019		
US 4569991	A	19860211	US 1983-457246	19830111
CA 1235547	A1	19880419	CA 1983-420060	19830124
BR 8300366	A	19831025	BR 1983-366	19830126
US 4581444	A	19860408	US 1985-723186	19850415
PRIORITY APPLN. INFO.:			JP 1982-10687	A 19820126
			JP 1982-76296	A 19820507
			JP 1982-133327	A 19820730
			US 1983-457246	A3 19830111

ED Entered STN: 04 Mar 2005

AB Thermoplastics are separated from latexes in a free-flowing form nearly free of occluded water by flocculation with water-soluble polymers having quaternary ammonium groups. Thus, stirring 10 kg 45% latex of PVC [9002-86-2] paste with 8 g 3,4-ionene bromide [31622-86-3] for 1 h and centrifuging at 3200 G gave a puttylike cake of PVC containing 30% H<sub>2</sub>O. Granulating this cake and fluidized drying at 120° gave PVC granules dispersing readily in 60 phr plasticizer.

IC C08F006-22; C08C001-14; C08J003-12

CC 35-4 (Chemistry of Synthetic High Polymers)

IT Rubber, butadiene-styrene, uses and miscellaneous

RL: USES (Uses)

(latexes, flocculation of, by quaternary ammonia polymers)

IT 26006-19-9	26062-79-3	31546-82-4	31622-86-3	31622-87-4
31622-88-5	32077-11-5	39660-17-8	54115-92-3	59407-64-6
59407-90-8	59424-41-8	70642-67-0	92140-69-7	93082-31-6
93082-32-7	93082-33-8	93082-34-9	93082-35-0	93082-36-1
93082-37-2	<u>93082-38-3</u>			

RL: USES (Uses)

(flocculating agents, for polymer latexes)

IT 9003-55-8

RL: USES (Uses)

(rubber, butadiene-styrene; latexes, flocculation of, by quaternary ammonia polymers)

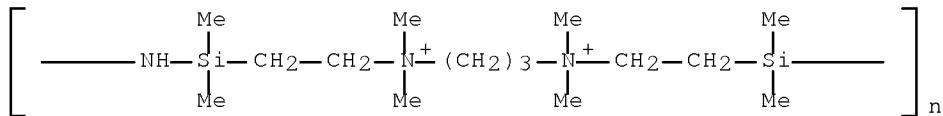
IT 93082-38-3

RL: USES (Uses)

(flocculating agents, for polymer latexes)

RN 93082-38-3 HCPLUS

CN Poly[imino(dimethylsilylene)-1,2-ethanediyl(dimethyliminio)-1,3-propanediyl(dimethyliminio)-1,2-ethanediyl(dimethylsilylene) dibromide] (9CI) (CA INDEX NAME)



●2 Br<sup>-</sup>

IT 9003-55-8

RL: USES (Uses)

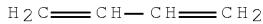
(rubber, butadiene-styrene; latexes, flocculation of, by quaternary ammonia polymers)

RN 9003-55-8 HCPLUS

CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

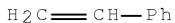
CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8



L81 ANSWER 27 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 1984:70108 HCPLUS Full-text  
 DOCUMENT NUMBER: 100:70108  
 ORIGINAL REFERENCE NO.: 100:10683a,10686a  
 TITLE: Butyl rubber and/or polyisobutylene sealants  
 INVENTOR(S): Schwebel, Georg; Lipponer, Gerhard  
 PATENT ASSIGNEE(S): Teroson G.m.b.H., Fed. Rep. Ger.  
 SOURCE: Ger. Offen., 17 pp.  
 CODEN: GWXXBX  
 DOCUMENT TYPE: Patent  
 LANGUAGE: German  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 3217516	A1	19831110	DE 1982-3217516	19820510
DE 3217516	C2	19850425		
EP 93918	A1	19831116	EP 1983-103944	19830422

R: AT, BE, DE, FR, GB, IT, NL

PRIORITY APPLN. INFO.: DE 1982-3217516 A 19820510

ED Entered STN: 12 May 1984

AB Homogeneous, storage-stable sealants, useful in glazing, are prepared by mixing silicones with butyl rubber and/or polyisobutylene (I) [9003-27-4]. Thus, 680 parts homogeneous mixture of 67:33 butyl rubber-paraffin oil 60, paraffin oil 90, I (mol. weight 8000) 20, ZnS 30, amorphous CaCO<sub>3</sub> 600, and xylene 50 parts was mixed with difunctional siloxane (viscosity 80 Pa-s at 20°) 120, silicone oil (viscosity apprx.1 Pa-s) 70, Mol. Sieve 4A 10, precipitated CaCO<sub>3</sub> 60, and tris(cyclohexylamino)methylsilane [15901-40-3] 20 parts to give a sealant with d. 1.5, 70-90% modulus 0.3-0.4 N/cm<sup>2</sup>, and Shore A hardness after 6 mo 23, unchanged by 3 mo weathering or 3000 h Xeno-Test exposure.

IC C09K003-10; C08L023-22; C08L083-04

CC 42-11 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 39, 57

ST siloxane blend sealant; polyisobutylene blend sealant; butyl rubber blend sealant; blend silicone sealant; aminosilane catalyst  
crosslinking sealant

IT Rubber, butadiene-styrene, uses and miscellaneous  
Rubber, butyl, uses and miscellaneous  
RL: USES (Uses)  
(sealants, containing silicones, weather-resistant)

IT Crosslinking catalysts  
(tris(cyclohexylamino)methylsilane, for silicone-polyisobutylene sealants)

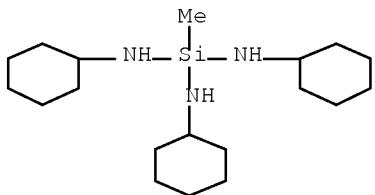
IT 15901-40-3  
RL: CAT (Catalyst use); USES (Uses)  
(crosslinking catalysts, for polyisobutylene-silicone sealants)

IT 9003-55-8  
RL: USES (Uses)  
(rubber, butadiene-styrene; sealants, containing silicones, weather-resistant)

IT 15901-40-3  
RL: CAT (Catalyst use); USES (Uses)  
(crosslinking catalysts, for polyisobutylene-silicone sealants)

RN 15901-40-3 HCPLUS

CN Silanetriamine, N,N',N'''-tricyclohexyl-1-methyl- (CA INDEX NAME)

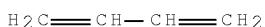


IT 9003-55-8  
RL: USES (Uses)  
(rubber, butadiene-styrene; sealants, containing silicones, weather-resistant)

RN 9003-55-8 HCPLUS

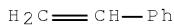
CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6

CM 2

CRN 100-42-5



L81 ANSWER 28 OF 40 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1976:37324 HCPLUS Full-text  
 DOCUMENT NUMBER: 84:37324  
 ORIGINAL REFERENCE NO.: 84:6063a,6066a  
 TITLE: Lithographic plates using hydrolyzable mercapto-silane compounds  
 INVENTOR(S): Boardman, Harold; Wagner, Richard L.  
 PATENT ASSIGNEE(S): Hercules Inc., USA  
 SOURCE: U.S., 7 pp.  
 CODEN: USXXAM  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 3907564	A	19750923	US 1974-483845	19740627
PRIORITY APPLN. INFO.:			US 1974-483845	19740627

ED Entered STN: 12 May 1984

AB Lithog. plates are prepared by coating suitable supports with an unsatd. oleophilic organic polymer and a hydrolyzable mercaptosilane compound, imagewise exposing to photograft the mercaptosilane compound onto the polymer, developing to remove mercaptosilane from the unexposed areas, and amplifying the hydrophilicity of the mercaptosilane groups by treating with  $\geq 1$  amplifying agent selected from soluble silicate solns. and colloidal SiO<sub>2</sub> dispersions. Thus, a grained Al plate was coated with an anhydrous Cellosolve acetate solution containing Cellosolve acetate 57.5, polyester resin prepared from fumaric acid and the diol made by condensing propylene oxide with bisphenol A 30, Zn acetate 1, and the biuret of hexamethylene diisocyanate crosslinking agent 11.5 parts, cured for 1 hr at 120°, a 0.1 molar MeOH solution of  $\gamma$ -mercaptopropyltrimethoxysilane (I) containing 10% by weight (based on I) of phloxine dye brushed onto the crosslinked polyester layer to give a surface concentration of 10-6 mole I/cm<sup>2</sup>, exposed through a transparency at a distance of 20 in. for 3 min using a 650 W visible movie light-type lamp, developed with MeOH, soaked for 15 hr in a 26% aqueous K silicate solution, washed with water, wiped with processing gum, and inked with a lithog. ink and fountain solution and used in a lithog. press to give >1000 copies with satisfactory results.

IC G03F

INCL 096033000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic Processes)

IT 14814-09-6 57765-35-2 57765-36-3 57765-37-4 57765-38-5

RL: USES (Uses)

(lithog. plate photosensitive composition containing unsatd. polyester and, photograftable)

IT 57765-39-6 57765-40-9 57765-41-0 57765-42-1

57765-43-2 57814-12-7

RL: USES (Uses)

(lithog. plate photosensitive composition containing unsatd. polyester

resin

and, photograftable)

IT 9003-55-8 25034-71-3

RL: USES (Uses)

(photografting of alkylmercaptosilane compds. on layers of, for lithog. plate preparation)

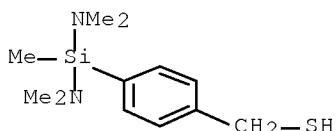
IT 57765-35-2

RL: USES (Uses)

(lithog. plate photosensitive composition containing unsatd. polyester and, photograftable)

RN 57765-35-2 HCPLUS

CN Benzenemethanethiol, 4-[bis(dimethylamino)methylsilyl]- (CA INDEX NAME)

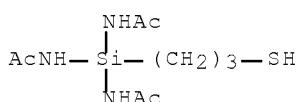
IT 57765-42-1 57765-43-2

RL: USES (Uses)

(lithog. plate photosensitive composition containing unsatd. polyester resin and, photograftable)

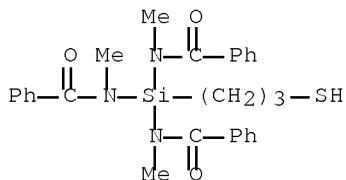
RN 57765-42-1 HCPLUS

CN Acetamide, N,N',N'''-[(3-mercaptopropyl)silylidene]tris- (CA INDEX NAME)



RN 57765-43-2 HCPLUS

CN Benzamide, N,N',N'''-[(3-mercaptopropyl)silylidene]tris[N-methyl- (CA INDEX NAME)]

IT 9003-55-8

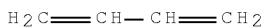
RL: USES (Uses)

(photografting of alkylmercaptosilane compds. on layers of, for lithog. plate preparation)

RN 9003-55-8 HCAPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

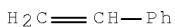
CM 1

CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5  
 CMF C8 H8



=> d ibib ab hit 29-32

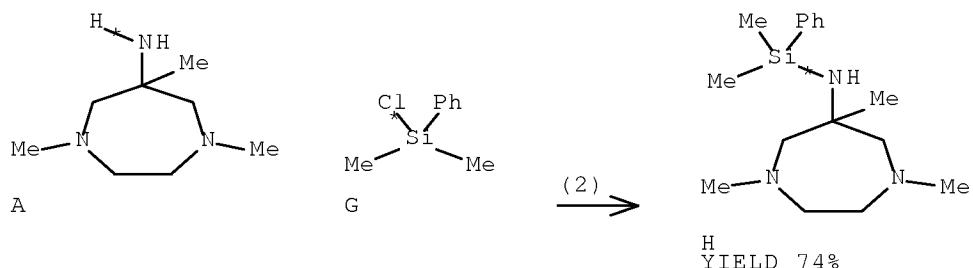
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' - CONTINUE? (Y)/N:y

L81 ANSWER 29 OF 40 CASREACT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 147:541952 CASREACT Full-text  
 TITLE: Monoanionic fac- $\kappa^3$  Ligands Derived from  
 6-Amino-1,4-diazepine: Ligand Dependence of Stability  
 and Catalytic Activity of Their Scandium Alkyl  
 Derivatives  
 AUTHOR(S): Ge, Shaozhong; Meetsma, Auke; Hessen, Bart  
 CORPORATE SOURCE: Center for Catalytic Olefin Polymerization, Stratingh  
 Institute for Chemistry, University of Groningen,  
 Groningen, 9747 AG, Neth.  
 SOURCE: Organometallics (2007), 26(22), 5278-5284  
 CODEN: ORGND7; ISSN: 0276-7333  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Two new monoanionic fac- $\kappa^3$  tridentate pro-ligands N-R-hexahydro-1,4,6-trimethyl-1H-1,4-diazepin-6-amine (HL1, R = Me; HL2, R = PhMe2Si) were prepared by alkylation and silylation, resp., of hexahydro-1,4,6-trimethyl-1H-1,4-diazepine-6-amine. Protonolysis of Sc(CH<sub>2</sub>SiMe<sub>3</sub>)<sub>3</sub>(THF)<sub>2</sub> by HL1 and HL2 yielded fac-[(L1-N,N',N'')Sc(CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>(THF)] (1) and fac-[(L2-N,N',N'')Sc(CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>(THF)] (2), resp. In toluene solvent, 1 loses a THF mol. and decomp. via metalation of the Me group of the amido functionality to give [[CH<sub>2</sub>- $\kappa^1$ C-( $\mu$ -N)-hexahydro-1,4,6-trimethyl- 1,4-diazepine-

$\kappa\text{N}1,\kappa\text{N}4]\text{Sc}(\text{CH}_2\text{SiMe}_3)]_2$  (3), whereas complex 2 loses a THF mol. to give stable  $[(\text{L}_2-\text{N},\text{N}',\text{N}'')\text{Sc}(\text{CH}_2\text{SiMe}_3)]_2$  (4). In THF, both 1 and 2 react with  $[\text{PhNMe}_2\text{H}][\text{B}(\text{C}_6\text{H}_5)_4]$  to generate the ionic monoalkyl compds.  $[(\text{L}-\text{N},\text{N}',\text{N}'')\text{Sc}(\text{CH}_2\text{SiMe}_3)(\text{THF})_2][\text{B}(\text{C}_6\text{H}_5)_4]$  (5, L = L1, 6, L = L2). Nevertheless, only the THF-free system 4/ $[\text{PhNMe}_2\text{H}][\text{B}(\text{C}_6\text{F}_5)_4]$  shows good ethylene polymerization activity, showing that a single THF mol. per Sc suffices to quench the catalysis. Dinuclear 3 reacts with ethylene via stoichiometric insertion into the Sc-CH<sub>2</sub>N bond to yield  $[(\text{CH}_2-\kappa'\text{C}-\text{CH}_2\text{CH}_2(\mu-\text{N})-\text{hexahydro-1,4,6-trimethyl-1,4-diazepine}-\kappa\text{N}1,\kappa\text{N}4)\text{Sc}(\text{CH}_2\text{SiMe}_3)]_2$  (7). Crystal structures of 1, 2, 3 and 7 are reported.

REFERENCE COUNT: 42 THERE ARE 42 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(2) OF 24 A + G ==> H...



RX(2) RCT A 172092-33-0

STAGE(1)

RGT I 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane  
CON SUBSTAGE(1) -40 deg C  
SUBSTAGE(2) 3 hours, room temperature  
SUBSTAGE(3) room temperature -> -40 deg C

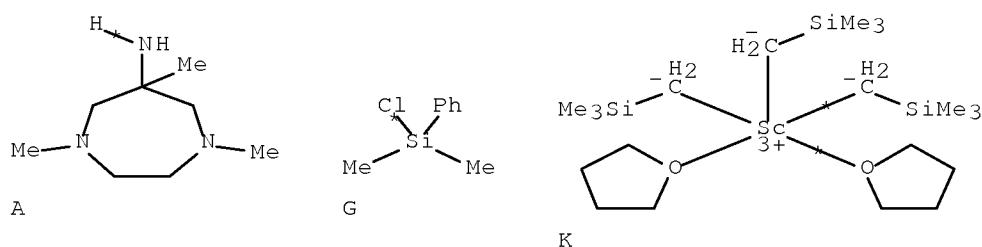
STAGE(2)

RCT G 768-33-2  
CON overnight, room temperature

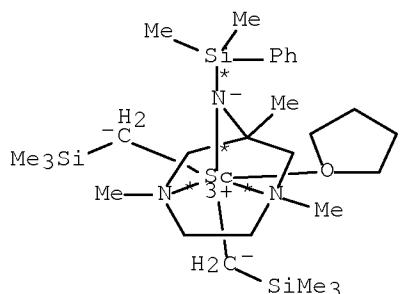
PRO H 957049-96-6

RX(15) OF 24 COMPOSED OF RX(2), RX(4)

RX(15) A + G + K ==> N



2  
STEPS  
→



N  
YIELD 83%

RX(2) RCT A 172092-33-0

STAGE(1)

RGT I 109-72-8 BuLi  
 SOL 60-29-7 Et2O, 110-54-3 Hexane  
 CON SUBSTAGE(1) -40 deg C  
 SUBSTAGE(2) 3 hours, room temperature  
 SUBSTAGE(3) room temperature -> -40 deg C

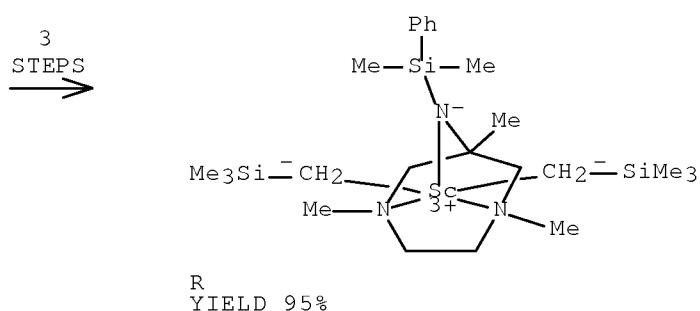
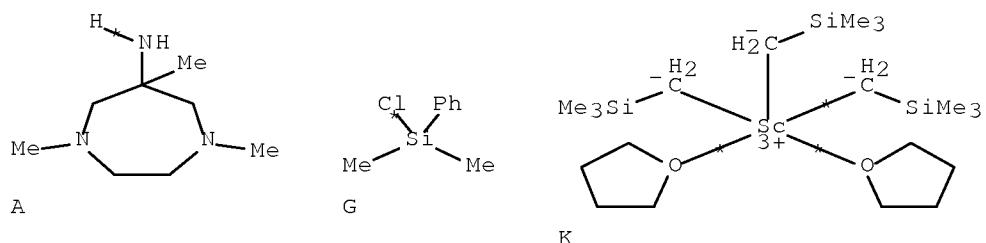
STAGE(2)

RCT G 768-33-2  
 CON overnight, room temperature

PRO H 957049-96-6

RX(4) RCT H 957049-96-6, K 41705-65-1  
 PRO N 957049-87-5  
 SOL 109-66-0 Pentane  
 CON 0.5 hours, room temperature

RX(21) OF 24 COMPOSED OF RX(2), RX(4), RX(6)  
 RX(21) A + G + K ==> R



RX(2)        RCT A 172092-33-0

STAGE(1)

RGT I 109-72-8 BuLi  
 SOL 60-29-7 Et2O, 110-54-3 Hexane  
 CON SUBSTAGE(1) -40 deg C  
 SUBSTAGE(2) 3 hours, room temperature  
 SUBSTAGE(3) room temperature -> -40 deg C

STAGE(2)

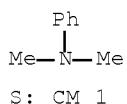
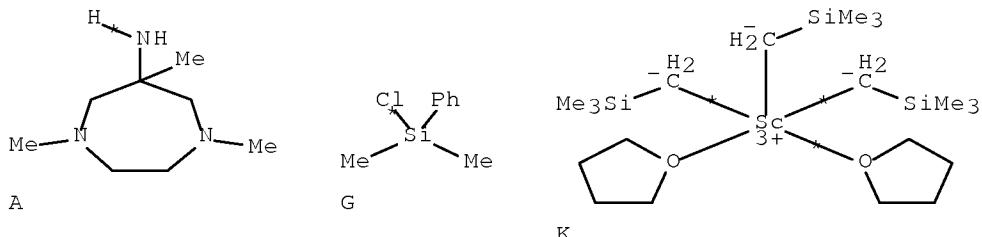
RCT G 768-33-2  
 CON overnight, room temperature

PRO H 957049-96-6

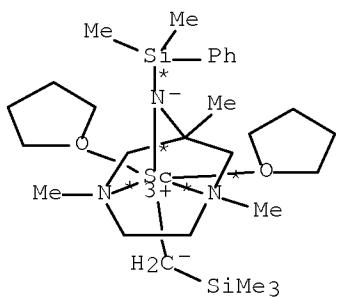
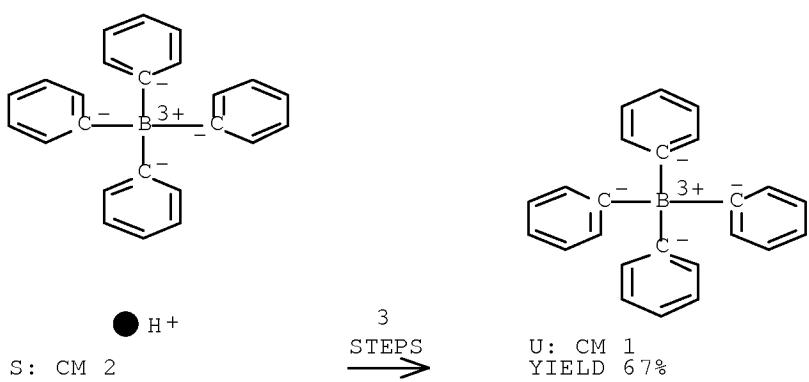
RX(4)        RCT H 957049-96-6, K 41705-65-1  
 PRO N 957049-87-5  
 SOL 109-66-0 Pentane  
 CON 0.5 hours, room temperature

RX(6)        RCT N 957049-87-5  
 PRO R 957049-89-7  
 SOL 108-88-3 PhMe  
 CON room temperature

RX(22) OF 24 COMPOSED OF RX(2), RX(4), RX(8)  
 RX(22) A + G + K + S ==> R



S : CM 1



U: CM 2  
YIELD 67%

## STAGE(1)

RGT I 109-72-8 BuLi  
 SOL 60-29-7 Et2O, 110-54-3 Hexane  
 CON SUBSTAGE(1) -40 deg C  
     SUBSTAGE(2) 3 hours, room temperature  
     SUBSTAGE(3) room temperature -> -40 deg C

## STAGE(2)

RCT G 768-33-2  
 CON overnight, room temperature

PRO H 957049-96-6

RX(4) RCT H 957049-96-6, K 41705-65-1  
 PRO N 957049-87-5  
 SOL 109-66-0 Pentane  
 CON 0.5 hours, room temperature

RX(8) RCT N 957049-87-5, S 118573-45-8  
 PRO U 957049-93-3  
 SOL 109-99-9 THF  
 CON 20 minutes, room temperature  
 NTE product was precipitated with toluene

ST scandium dialkyl hexahydrodiazepinamine amido facial tridentate complex prepn structure; amido diamine scandium dialkyl complex prepn dealkylation ethene polymn; ethene polymn catalyst scandium amido diamine facial hexahydrodiazepinamine complex; heterocyclic diamine amido scandium alkyl prepn structure ethene polymn; crystal structure scandium alkyl hexahydrodiazepinamine amido diamine facial chelate; mol structure scandium alkyl hexahydrodiazepinamine amido diamine facial chelate

IT Polymerization catalysts  
 (coordination, scandium; preparation, structure, dealkylation and ethene polymerization activity of scandium fac-tridentate hexahydro-1,4-diazepine-6-amine amido dialkyl complexes)

L81 ANSWER 30 OF 40 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 140:146245 CASREACT Full-text

TITLE: Transition metal complexes containing functionalized organoimido and phosphaneiminato ligands

AUTHOR(S): Siemeling, U.; Koelling, L.; Kuhnert, O.; Neumann, B.; Stammler, A.; Stammler, H. G.; Fink, G.; Kaminski, E.; Kiefer, A.; Schrock, R. R.

CORPORATE SOURCE: Fachbereich Physik Univ., Kassel, Germany

SOURCE: Zeitschrift fuer Anorganische und Allgemeine Chemie (2003), 629(5), 781-792

CODEN: ZAACAB; ISSN: 0044-2313

PUBLISHER: Wiley-VCH Verlag GmbH & Co. KGaA

DOCUMENT TYPE: Journal

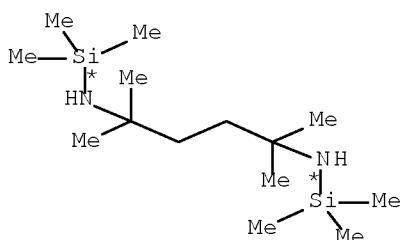
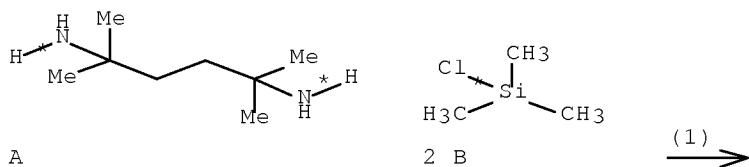
LANGUAGE: English

AB Two different types of modified imido and phosphaneiminato ligands are investigated, namely chelate ligands and redox-functionalized ligands. The first examples of di(organoimido)chromium as well as di(phosphaneiminato)titanium and niobium chelates are described. Furthermore, the first complexes containing redox-functionalized organoimido ligands are presented, together with the first structurally characterized redox-functionalized phosphaneiminato complex. Compds. of the type [(RN)<sub>2</sub>M(CH<sub>2</sub>Ph)<sub>2</sub>] (M = Cr, Mo) are used as catalysts for the (co-)polymerization of the polar

olefins Me methacrylate, acrylonitrile and vinyl acetate. A range of x-ray crystal structure detns. provide clear evidence for the quantum-chemical result that, similar to organoimido complexes, the potential energy well for the angle at the nitrogen atom is very shallow for phosphaneiminato complexes.

REFERENCE COUNT: 73 THERE ARE 73 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(1) OF 13      A + 2 B ==> C...



C  
YIELD 76%

RX(1)      RCT A 23578-35-0

STAGE(1)

RGT D 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane  
CON 3 hours, 0 deg C → room temperature

STAGE(2)

RCT B 75-77-4  
CON 14 hours, 0 deg C → room temperature

PRO C 288847-02-9

IT Electric potential

Polymerization catalysts

(preparation, crystal structure, and polymerization catalytic activity of transition metal complexes containing functionalized organoimido and phosphaneiminato ligands)

IT 80-62-6, Methyl methacrylate 107-13-1, Acrylonitrile, reactions 108-05-4, Vinyl acetate, reactions 6921-34-2, Benzylmagnesium chloride 7631-95-0, Sodium molybdate 14977-61-8, Chromyl chloride 23578-35-0, 2,5-Diamino-2,5-dimethylhexane

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation, crystal structure, and polymerization catalytic activity of transition metal complexes containing functionalized organoimido and phosphaneiminato ligands)

IT 9003-20-7P, Poly vinyl acetate 9011-14-7P, Poly methyl methacrylate  
 25014-41-9P, Poly acrylonitrile 30396-85-1P, Acrylonitrile methyl methacrylate copolymer

RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation, crystal structure, and polymerization catalytic activity of transition metal complexes containing functionalized organoimido and phosphaneiminato ligands)

L81 ANSWER 31 OF 40 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 135:380217 CASREACT Full-text  
 TITLE: Synthesis, characterization and ethylene polymerization activity of zirconium complexes containing nonsymmetric diamido ligands derived from 2-aminobenzylamine

AUTHOR(S): Gauvin, Regis M.; Lorber, Christian; Choukroun, Robert; Donnadieu, Bruno; Kress, Jacky

CORPORATE SOURCE: Laboratoire de Chimie des Metaux de Transition et de Catalyse, UMR du CNRS 7513, Institut Le Bel, Universite Louis Pasteur, Strasbourg, 67000, Fr.

SOURCE: European Journal of Inorganic Chemistry (2001), (9), 2337-2346

CODEN: EJICFO; ISSN: 1434-1948

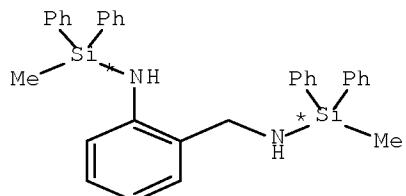
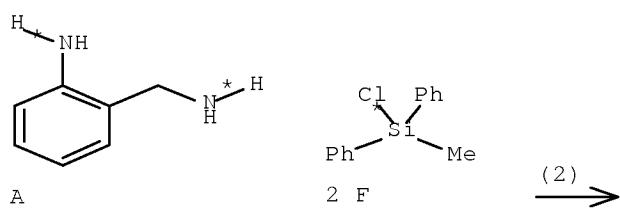
PUBLISHER: Wiley-VCH Verlag GmbH

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Several N,N'-bis(trialkylsilyl)-substituted diamines [(SiR<sub>3</sub>)<sub>2</sub>-ABA]H<sub>2</sub> [ABA = 2-amidobenzylamido, SiR<sub>3</sub> = SiMe<sub>3</sub> (1a), SiMePh<sub>2</sub> (1b), SiMe<sub>2</sub>tBu (1c) or SiPr<sub>3</sub> (1d)], together with related compds. in which the substituents of the two N atoms are different, e.g. [(SiMePh<sub>2</sub>)(SiMe<sub>3</sub>)-ABA]H<sub>2</sub> (1g), were synthesized. Their reaction with 2 equiv of BuLi afforded the dilithiated derivs., which reacted with ZrCl<sub>4</sub> to yield metallaspirocyclic complexes Zr[(SiR<sub>3</sub>)<sub>2</sub>-ABA]₂. Protonolysis of Zr(NMe<sub>2</sub>)<sub>4</sub> with 1 equiv of the parent diamines led to the monosubstituted complexes Zr[(SiR<sub>3</sub>)<sub>2</sub>-ABA](NMe<sub>2</sub>)<sub>2</sub> [SiR<sub>3</sub> = SiMe<sub>3</sub> (4a), SiMePh<sub>2</sub> (4b) or SiMe<sub>2</sub>tBu (4c)] and Zr[(SiMePh<sub>2</sub>)(SiMe<sub>3</sub>)-ABA](NMe<sub>2</sub>)<sub>2</sub> (4g) in high yield, and subsequent reaction with excess SiMe<sub>3</sub>Cl afforded the dichlorides Zr[(SiMe<sub>3</sub>)<sub>2</sub>-ABA]Cl<sub>2</sub> (5a), Zr[(SiMe<sub>2</sub>tBu)<sub>2</sub>-ABA]Cl<sub>2</sub> (5c), and Zr[(SiMePh<sub>2</sub>)(SiMe<sub>3</sub>)-ABA]Cl<sub>2</sub> (5g). The x-ray crystal structure of 5c shows that it forms dimers via two Zr-Cl bridges; also, a bonding interaction between the Zr center and the aryl ipso-C atom linked to the anilinic N atom is evident. A hydrochlorinated derivative of 5c, Zr[(SiMe<sub>2</sub>tBu)<sub>2</sub>(H)-ABA]Cl<sub>3</sub> (6c), was also analyzed by x-ray diffraction and shown to exhibit analogous structural characteristics. Low-temperature NMR studies revealed all these complexes to be fluxional and permitted an insight into the mol. structures in solution. The ABA framework undergoes a rocking motion about the corresponding ZrN<sub>2</sub> plane, whose activation energy is 37-43 kJ mol<sup>-1</sup>. Compds. 3 and 5 exist as several stereoisomers that interconvert by this process. On activation with Me aluminoxane, the dichloride complexes of type 5 polymerize ethylene at both room temperature and pressure to yield linear high mol. mass polyethylenes with a broad mol. mass distribution.

REFERENCE COUNT: 21 THERE ARE 21 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT



<sup>G</sup> YIELD 86%

RX(2) RCT A 4403-69-4

STAGE(1)

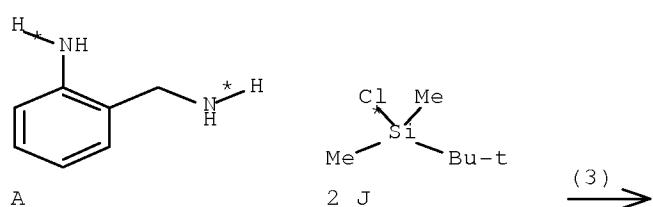
RGT H 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane

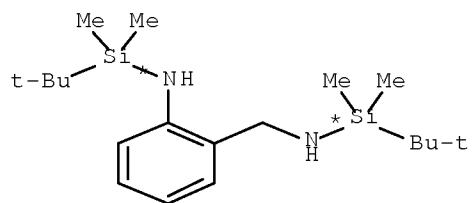
STAGE(2)

RCT F 144-79-6  
SOL 60-29-7 Et2O

PRO G 374074-73-4  
NTE product depends on stoichiometry

RX(3) OF 48 A + 2 J ===> K...



RX(3) RCT A 4403-69-4

## STAGE (1)

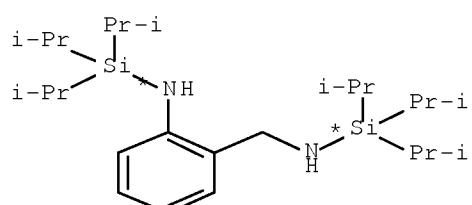
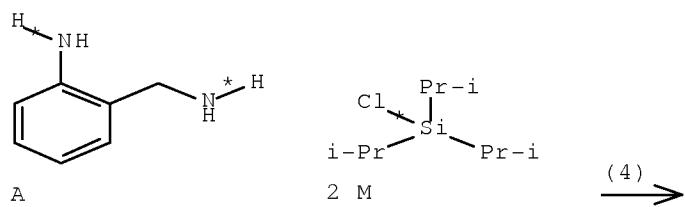
RGT H 109-72-8 BuLi  
 SOL 109-99-9 THF, 60-29-7 Et2O

## STAGE (2)

RCT J 18162-48-6  
 SOL 60-29-7 Et2O

PRO K 374074-74-5

RX(4) OF 48 A + 2 M ==&gt; N...



N  
 YIELD 82%

RX(4) RCT A 4403-69-4

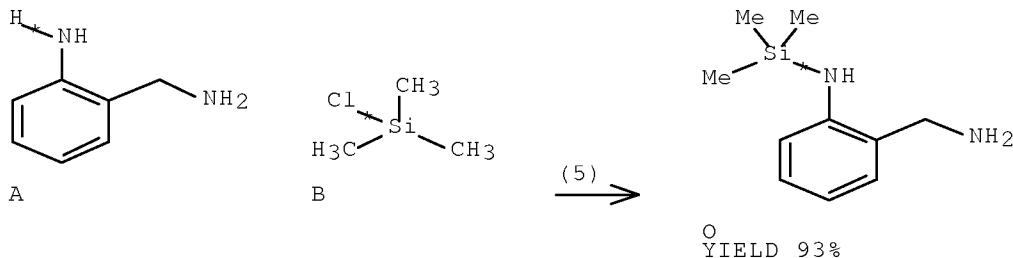
## STAGE (1)

RGT H 109-72-8 BuLi  
 SOL 109-99-9 THF, 60-29-7 Et2O

STAGE (2)  
 RCT M 13154-24-0  
 SOL 60-29-7 Et2O

PRO N 374074-75-6

RX(5) OF 48      A + B ==> C



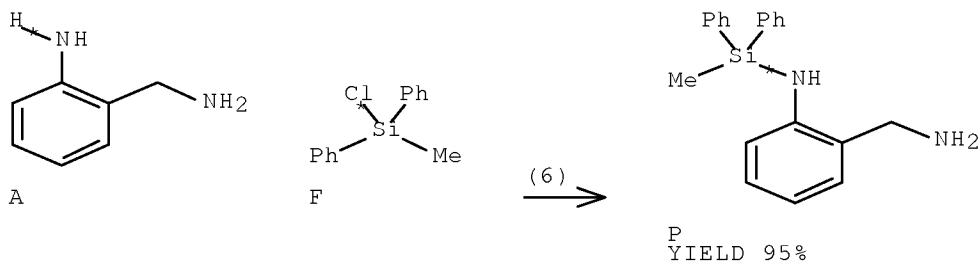
RX(5)      RCT A 4403-69-4

STAGE (1)  
 RGT H 109-72-8 BuLi  
 SOL 110-54-3 Hexane, 60-29-7 Et2O

STAGE (2)  
 RCT B 75-77-4

PRO O 374074-76-7  
 NTE product depends on reaction conditions

RX(6) OF 48      A + E ==> F...



RX(6)      RCT A 4403-69-4

STAGE (1)  
 RGT H 109-72-8 BuLi

10/599,651

SOL 60-29-7 Et2O, 110-54-3 Hexane

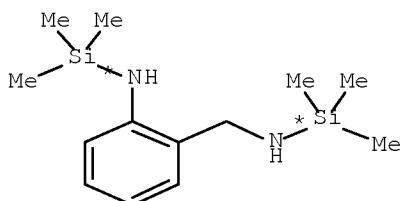
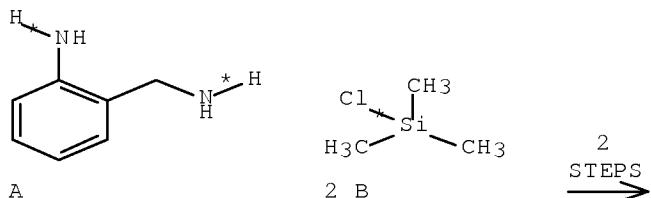
STAGE (2)

RCT F 144-79-6

PRO P 374074-77-8

NTE product depends on stoichiometry

RX(25) OF 48 COMPOSED OF RX(1), RX(8)  
RX(25) A + 2 B ==> R



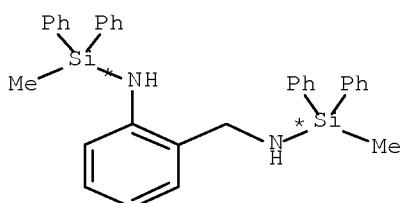
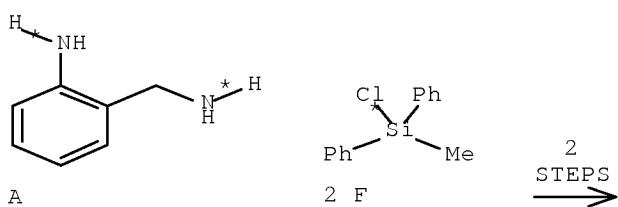
●2 Li

R  
YIELD 58%

RX(1) RCT A 4403-69-4, B 75-77-4  
RGT D 121-44-8 Et3N  
PRO C 249514-40-7  
SOL 60-29-7 Et2O  
NTE product depends on reaction conditions

RX(8) RCT C 249514-40-7  
RGT H 109-72-8 BuLi  
PRO R 374074-79-0  
SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(27) OF 48 COMPOSED OF RX(2), RX(9)  
RX(27) A + 2 E ==> T



•<sub>2</sub> Li

T  
YIELD 34%

RX(2) RCT A 4493-69-4

## STAGE (1)

RGT H 109-72-8 BuLi  
SOL 60-29-7 Et<sub>2</sub>O, 110-54-3 Hexane

## STAGE (2)

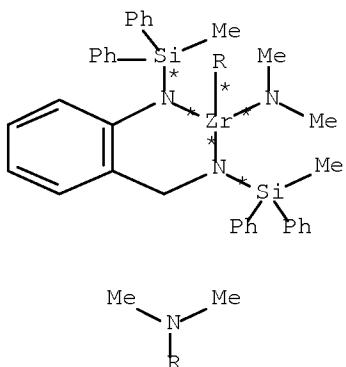
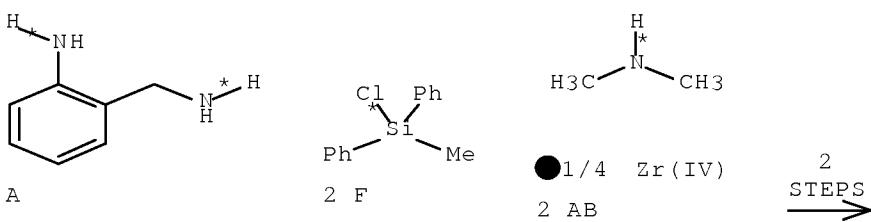
RCT F 144-79-6  
SOL 60-29-7 Et20

PRO G 374074-73-4

NTE product depends on stoichiometry

RX(9)	RCT	G	374074-73-4
	RGT	H	109-72-8 BuLi
	PRO	T	<u>374074-80-3</u>
	SOL		109-66-0 Pentan

RX(28) OF 48 COMPOSED OF RX(2), RX(16)  
 RX(28) A + 2 F + 2 AB ==> AD



AD  
YIELD 96%

RX(2)      RCT    A 4403-69-4

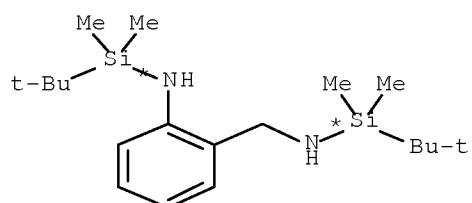
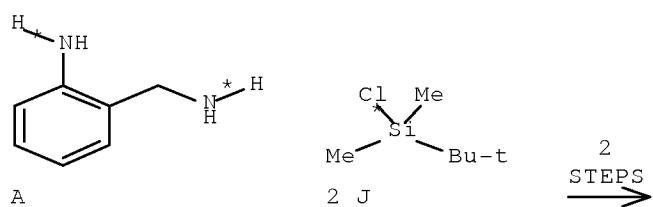
STAGE (1)  
RGT H 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane

STAGE (2)  
RCT F 144-79-6  
SOL 60-29-7 Et2O

PRO G 374074-73-4  
NTE product depends on stoichiometry

RX(16)      RCT    G 374074-73-4, AB 19756-04-8  
PRO AD 374074-87-0  
SOL 109-66-0 Pentane

RX(29) OF 48 COMPOSED OF RX(3), RX(10)  
RX(29) A + 2 F ==> U



●<sub>2</sub> Li  
 U YIELD 80%

RX(3)        RCT A 4403-69-4

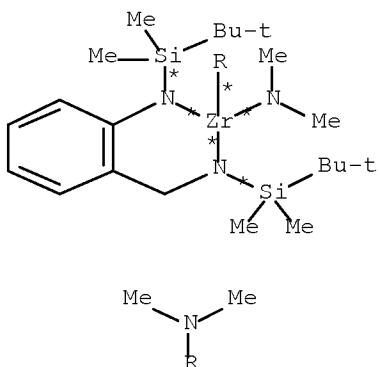
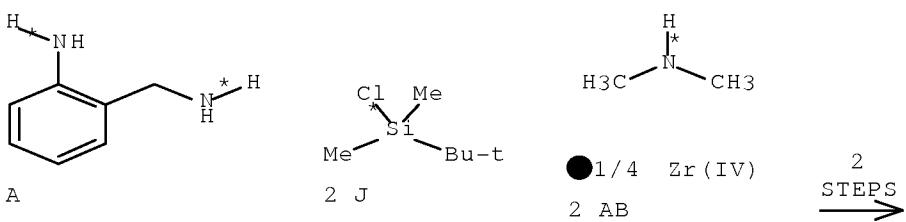
STAGE(1)  
 RGT H 109-72-8 BuLi  
 SOL 109-99-9 THF, 60-29-7 Et2O

STAGE(2)  
 RCT J 18162-48-6  
 SOL 60-29-7 Et2O

PRO K 374074-74-5

RX(10)        RCT K 374074-74-5  
 RGT H 109-72-8 BuLi  
 PRO U 374074-81-4  
 SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(30) OF 48 COMPOSED OF RX(3), RX(17)  
 RX(30) A + 2 J + 2 AB ==> AB



AE  
YIELD 99%

RX(3) RCT A 4403-69-4

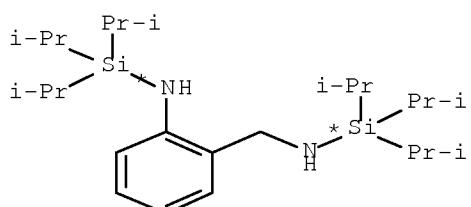
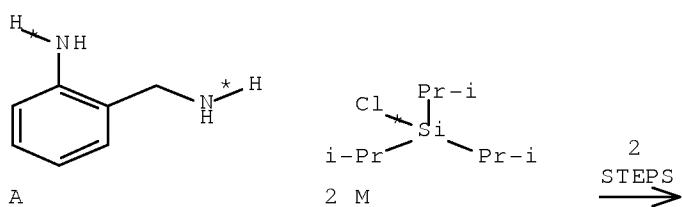
STAGE (1)  
 RGT H 109-72-8 BuLi  
 SOL 109-99-9 THF, 60-29-7 Et2O

STAGE (2)  
 RCT J 18162-48-6  
 SOL 60-29-7 Et2O

PRO K 374074-74-5

RX(17) RCT K 374074-74-5, AB 19756-04-8  
 PRO AE 374074-88-1  
 SOL 109-66-0 Pentane

RX(31) OF 48 COMPOSED OF RX(4), RX(11)  
 RX(31) A + 2 X ==> Y



●2 Li  
 V  
 YIELD 95%

RX(4)        RCT    A 4403-69-4

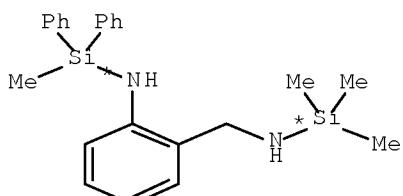
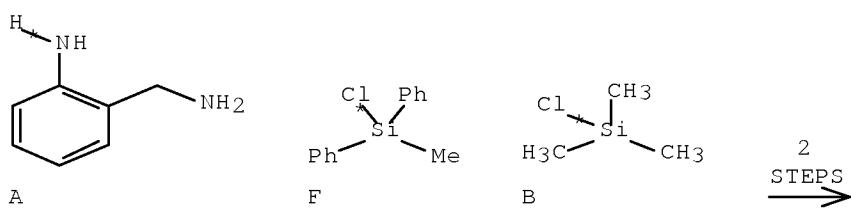
STAGE(1)  
 RGT H 109-72-8 BuLi  
 SOL 109-99-9 THF, 60-29-7 Et2O

STAGE(2)  
 RCT M 13154-24-0  
 SOL 60-29-7 Et2O

PRO N 374074-75-6

RX(11)        RCT N 374074-75-6  
 RGT H 109-72-8 BuLi  
 PRO V 374074-82-5  
 SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(32) OF 48 COMPOSED OF RX(6), RX(7)  
 RX(32)    A + E + B ==> Q



<sup>Q</sup>  
YIELD 87%

RX(6) RCT A 4403-69-4

STAGE(1)

RGT H 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane

STAGE(2)

RCT F 144-79-6

PRO P 374074-77-8

NTE product depends on stoichiometry

RX(7) RCT P 374074-77-8, B 75-77-4

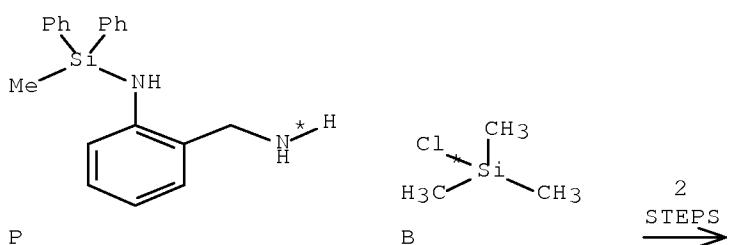
RGT D 121-44-8 Et3N

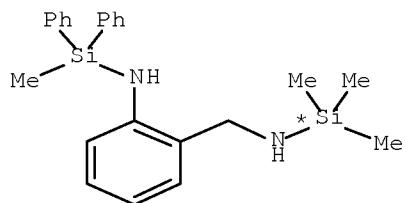
PRO Q 374074-78-9

SOL 60-29-7 Et2O

RX(33) OF 48 COMPOSED OF RX(7), RX(12)

RX(33) + ==>





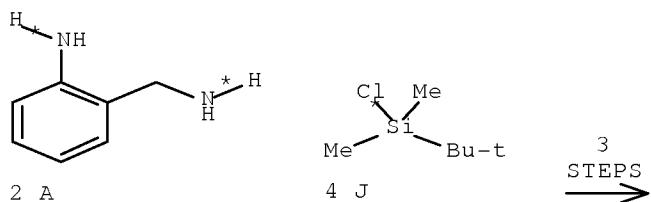
●2 Li

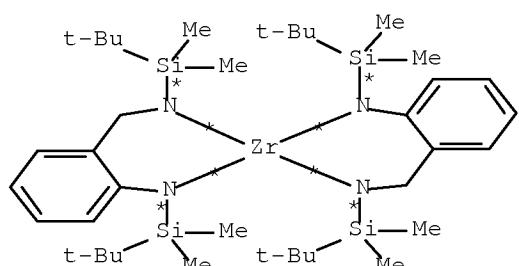
<sup>W</sup>  
YIELD 45%

RX(7) RCT P 374074-77-8, B 75-77-4  
 RGT D 121-44-8 Et3N  
 PRO Q 374074-78-9  
 SOL 60-29-7 Et2O

RX(12) RCT Q 374074-78-9  
 RGT H 109-72-8 BuLi  
 PRO W 374074-83-6  
 SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(41) OF 48 COMPOSED OF RX(3), RX(10), RX(13)  
 RX(41) 2 A + 4 J ==> X





X  
YIELD 52%

RX(3) RCT A 4403-69-4

STAGE(1)

RGT H 109-72-8 BuLi  
SOL 109-99-9 THF, 60-29-7 Et2O

STAGE(2)

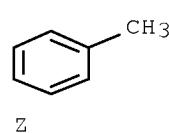
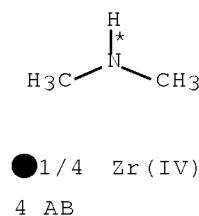
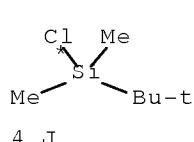
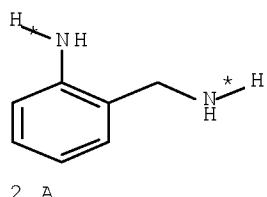
RCT J 18162-48-6  
SOL 60-29-7 Et2O

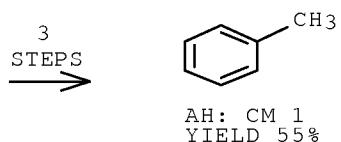
PRO K 374074-74-5

RX(10) RCT K 374074-74-5  
RGT H 109-72-8 BuLi  
PRO U 374074-81-4  
SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(13) RCT U 374074-81-4  
RGT Y 10026-11-6 ZrCl<sub>4</sub>  
PRO X 374074-84-7  
SOL 108-88-3 PhMe

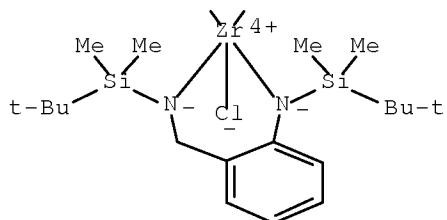
RX(42) OF 48 COMPOSED OF RX(3), RX(17), RX(20)  
RX(42) 2 A + 4 J + 4 AB + Z ==> XH





\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

PAGE 2-A



AH: CM 2  
YIELD 55%

RX(3) RCT A 4403-69-4

STAGE(1)

RGT H 109-72-8 BuLi  
SOL 109-99-9 THF, 60-29-7 Et2O

STAGE(2)

RCT J 18162-48-6  
SOL 60-29-7 Et2O

PRO K 374074-74-5

RX(17) RCT K 374074-74-5, AB 19756-04-8  
PRO AE 374074-88-1  
SOL 109-66-0 Pentane

RX(20) RCT AE 374074-88-1

STAGE(1)

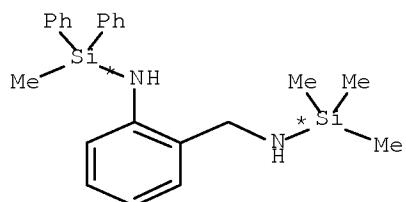
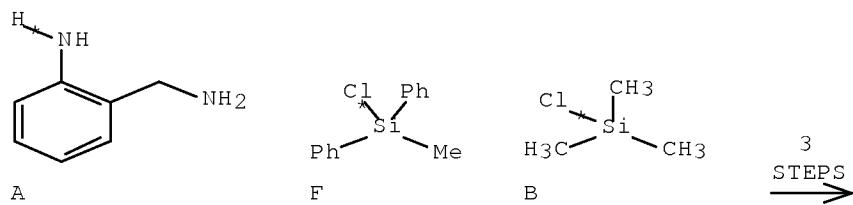
RGT B 75-77-4 Me3SiCl  
SOL 109-66-0 Pentane

STAGE(2)

RCT Z 108-88-3  
SOL 109-66-0 Pentane

PRO AH 374074-92-7

RX(43) OF 48 COMPOSED OF RX(6), RX(7), RX(12)  
RX(43) A + B ==> C



●<sub>2</sub> Li  
<sup>W</sup>  
 YIELD 45%

RX(6)        RCT    A 4403-69-4

STAGE(1)  
 RGT    H 109-72-8 BuLi  
 SOL    60-29-7 Et2O, 110-54-3 Hexane

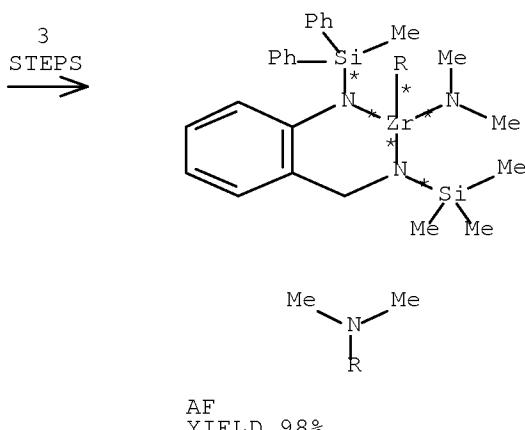
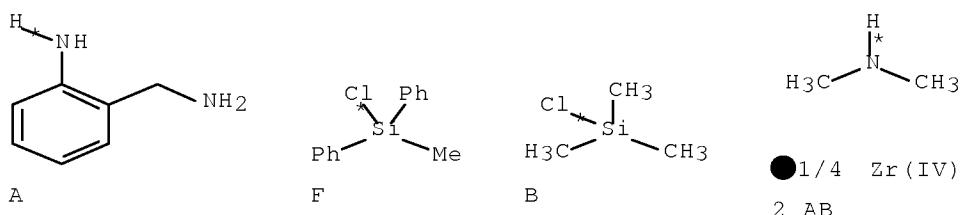
STAGE(2)  
 RCT    F 144-79-6

PRO    P 374074-77-8  
 NTE    product depends on stoichiometry

RX(7)        RCT    P 374074-77-8, B 75-77-4  
 RGT    D 121-44-8 Et3N  
 PRO    Q 374074-78-9  
 SOL    60-29-7 Et2O

RX(12)       RCT    Q 374074-78-9  
 RGT    H 109-72-8 BuLi  
 PRO    W 374074-83-6  
 SOL    109-66-0 Pentane, 110-54-3 Hexane

RX(44) OF 48 COMPOSED OF RX(6), RX(7), RX(18)  
 RX(44) A + B + B + 2 AB ==> AF



RX(6) RCT A 4403-69-4

STAGE(1)

RGT H 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane

STAGE(2)

RCT F 144-79-6

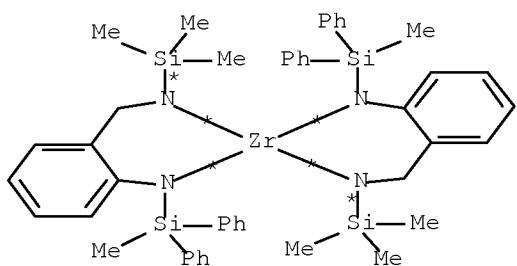
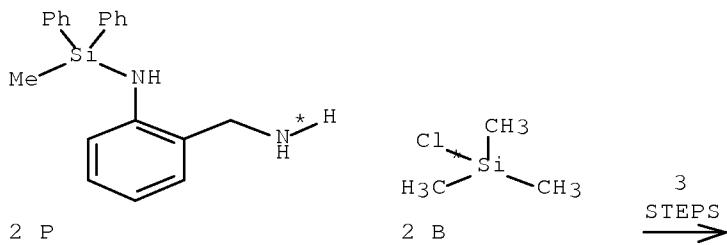
PRO P 374074-77-8

NTE product depends on stoichiometry

RX(7) RCT P 374074-77-8, B 75-77-4  
RGT D 121-44-8 Et3N  
PRO Q 374074-78-9  
SOL 60-29-7 Et2O

RX(18) RCT Q 374074-78-9, AB 19756-04-8  
PRO AF 374074-89-2  
SOL 109-66-0 Pentane

RX(45) OF 48 COMPOSED OF RX(7), RX(12), RX(14)  
RX(45) 2        + 2        ==>



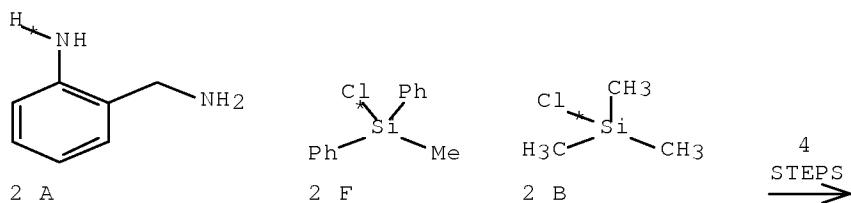
AA  
YIELD 76%

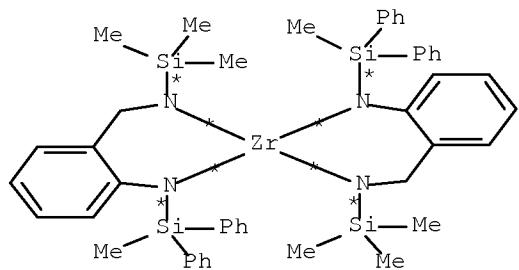
RX(7)        RCT P 374074-77-8, B 75-77-4  
 RGT D 121-44-8 Et<sub>3</sub>N  
 PRO Q 374074-78-9  
 SOL 60-29-7 Et<sub>2</sub>O

RX(12)        RCT Q 374074-78-9  
 RGT H 109-72-8 BuLi  
 PRO W 374074-83-6  
 SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(14)        RCT W 374074-83-6  
 RGT Y 10026-11-6 ZrCl<sub>4</sub>  
 PRO AA 374074-85-8  
 SOL 108-88-3 PhMe

RX(47) OF 48 COMPOSED OF RX(6), RX(7), RX(12), RX(14)  
 RX(47) 2 A + 2 F + 2 B ==> AA





AA  
YIELD 76%

RX(6) RCT A 4403-69-4

STAGE(1)

RGT H 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane

STAGE(2)

RCT F 144-79-6

PRO P 374074-77-8

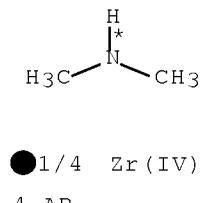
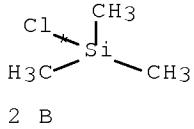
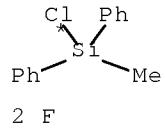
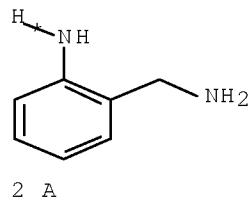
NTE product depends on stoichiometry

RX(7) RCT P 374074-77-8, B 75-77-4  
RGT D 121-44-8 Et3N  
PRO Q 374074-78-9  
SOL 60-29-7 Et2O

RX(12) RCT Q 374074-78-9  
RGT H 109-72-8 BuLi  
PRO W 374074-83-6  
SOL 109-66-0 Pentane, 110-54-3 Hexane

RX(14) RCT W 374074-83-6  
RGT Y 10026-11-6 ZrCl4  
PRO AA 374074-85-8  
SOL 108-88-3 PhMe

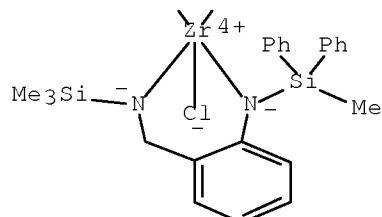
RX(48) OF 48 COMPOSED OF RX(6), RX(7), RX(18), RX(24)  
RX(48) 2 A + 2 F + 2 B + 4 AB ==> NN



4  
STEPS  
→

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

PAGE 2-A



AN  
YIELD 81%

RX(6) RCT A 4403-69-4

STAGE(1)

RGT H 109-72-8 BuLi  
SOL 60-29-7 Et2O, 110-54-3 Hexane

STAGE(2)

RCT F 144-79-6

PRO P 374074-77-8

NTE product depends on stoichiometry

RX(7) RCT P 374074-77-8, B 75-77-4

RGT D 121-44-8 Et3N

PRO Q 374074-78-9

SOL 60-29-7 Et2O

RX(18) RCT Q 374074-78-9, AB 19756-04-8

PRO AF 374074-89-2

SOL 109-66-0 Pentane

RX(24) RCT AF 374074-89-2

RGT B 75-77-4 Me3SiCl

PRO AN 374074-93-8

SOL 109-66-0 Pentane

AB Several N,N'-bis(trialkylsilyl)-substituted diamines [(SiR<sub>3</sub>)<sub>2</sub>-ABA]H<sub>2</sub> [ABA = 2-amidobenzylamido, SiR<sub>3</sub> = SiMe<sub>3</sub> (1a), SiMePh<sub>2</sub> (1b), SiMe<sub>2</sub>tBu (1c) or SiPr<sub>3</sub> (1d)], together with related compds. in which the substituents of the two N atoms are different, e.g. [(SiMePh<sub>2</sub>)(SiMe<sub>3</sub>)-ABA]H<sub>2</sub> (1g), were synthesized.

Their reaction with 2 equiv of BuLi afforded the dilithiated derivs., which reacted with ZrCl<sub>4</sub> to yield metallaspirocyclic complexes Zr[(SiR<sub>3</sub>)<sub>2</sub>-ABA]·<sub>2</sub>. Protonolysis of Zr(NMe<sub>2</sub>)<sub>4</sub> with 1 equiv of the parent diamines led to the monosubstituted complexes Zr[(SiR<sub>3</sub>)<sub>2</sub>-ABA](NMe<sub>2</sub>)<sub>2</sub> [SiR<sub>3</sub> = SiMe<sub>3</sub> (4a), SiMePh<sub>2</sub> (4b) or SiMe<sub>2</sub>tBu (4c)] and Zr[(SiMePh<sub>2</sub>)(SiMe<sub>3</sub>)-ABA](NMe<sub>2</sub>)<sub>2</sub> (4g) in high yield, and subsequent reaction with excess SiMe<sub>3</sub>Cl afforded the dichlorides Zr[(SiMe<sub>3</sub>)<sub>2</sub>-ABA]Cl<sub>2</sub> (5a), Zr[(SiMe<sub>2</sub>tBu)<sub>2</sub>-ABA]Cl<sub>2</sub> (5c), and Zr[(SiMePh<sub>2</sub>)(SiMe<sub>3</sub>)-ABA]Cl<sub>2</sub> (5g). The x-ray crystal structure of 5c shows that it forms dimers via two Zr-Cl bridges; also, a bonding interaction between the Zr center and the aryl ipso-C atom linked to the anilinic N atom is evident. A hydrochlorinated derivative of 5c, Zr[(SiMe<sub>2</sub>tBu)<sub>2</sub>(H)-ABA]Cl<sub>3</sub> (6c), was also analyzed by x-ray diffraction and shown to exhibit analogous structural characteristics. Low-temperature NMR studies revealed all these complexes to be fluxional and permitted an insight into the mol. structures in solution. The ABA framework undergoes a rocking motion about the corresponding ZrN<sub>2</sub> plane, whose activation energy is 37-43 kJ mol<sup>-1</sup>. Compds. 3 and 5 exist as several stereoisomers that interconvert by this process. On activation with Me aluminoxane, the dichloride complexes of type 5 polymerize ethylene at both room temperature and pressure to yield linear high mol. mass polyethylenes with a broad mol. mass distribution.

IT Polymerization catalysts

(zirconium amidobenzylamide chelate complexes as catalysts for polymerization  
of ethylene)

L81 ANSWER 32 OF 40 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 131:58976 CASREACT Full-text  
TITLE: Preparation of di(polycyclic amino  
)dialkoxy silanes as stereospecific  
polymerization catalysts

INVENTOR(S): Ikai, Shigeru; Fukunaga, Toshifumi; Fujimoto, Junichi

PATENT ASSIGNEE(S): Ube Industries, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

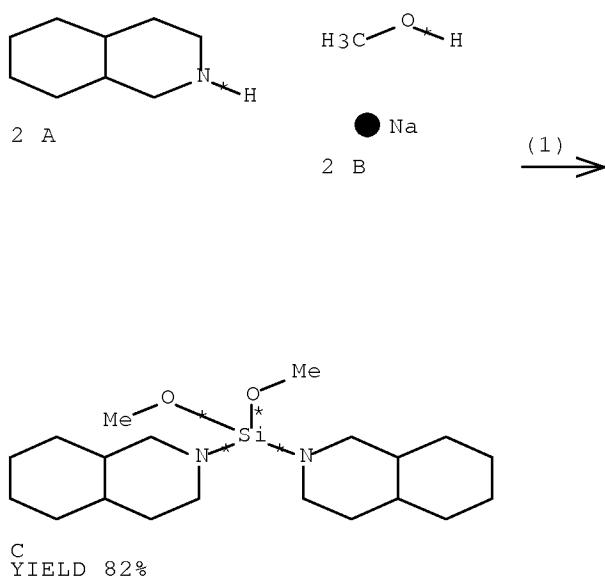
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11158190	A	19990615	JP 1997-328465	19971128
JP 3588995	B2	20041117		

PRIORITY APPLN. INFO.: JP 1997-328465 19971128

AB The title compds. are prepared by treatment of SiCl<sub>4</sub> with polycyclic secondary amines and alkali metal or alkaline earth alkoxides. A mixture of heptane, perhydroisoquinoline, and Et<sub>3</sub>N was added dropwise to SiCl<sub>4</sub> and the reaction mixture was further stirred at 70° for 4 h. After filtration of the reaction mixture, the filtrate was treated with a heptane slurry of NaOMe at 70° for 10 h to give 82% (based on Si) di(perhydroisoquinolino)dimethoxysilane.

RX(1) OF 1      2 A + 2 B ==> C

RX(1) RCT A 6329-61-9

## STAGE(1)

RGD 10026-04-7 SiCl<sub>4</sub>  
 CAT 121-44-8 Et<sub>3</sub>N  
 SOL 142-82-5 Heptane

## STAGE(2)

RCT B 124-41-4  
 SOL 142-82-5 Heptane

PRO C 207689-95-0

NTE 1st step 70° 4 h, 2nd step 70° 10 h

TI Preparation of di(polycyclic amino)dialkoxy silanes as stereospecific polymerization catalysts

IT Metal alkoxides

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkaline earth alkoxides; preparation of di(polycyclic amino)dialkoxy silanes as stereospecific polymerization catalysts)

IT Metal alkoxides

Metal alkoxides  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkali metal; preparation of di(polycyclic amino)dialkoxy silanes as stereospecific polymerization catalysts)

IT Alkali metal compounds

Alkali metal compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkoxides; preparation of di(polycyclic amino)dialkoxy silanes as stereospecific polymerization catalysts)

IT Heterocyclic compounds

RL: RCT (Reactant); RACT (Reactant or reagent)  
 (nitrogen, polycyclic; preparation of di(polycyclic amino)dialkoxy silanes as stereospecific polymerization catalysts)

IT Polymerization catalysts

(stereospecific; preparation of di(polycyclic amino)

IT 207689-95-0P, Di(perhydroisoquinolino)dimethoxysilane  
 RL: IMF (Industrial manufacture); SPN (Synthetic preparation); PREP  
 (Preparation)  
 (preparation of di(polycyclic amino)dialkoxy silanes as  
 stereospecific polymerization catalysts)

IT 124-41-4, Sodium methoxide 6329-61-9, Perhydroisoquinoline 10026-04-7,  
 Tetrachlorosilane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of di(polycyclic amino)dialkoxy silanes as  
 stereospecific polymerization catalysts)

=> d iall abeq tech abex 33-36

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX,  
 JAPIO' - CONTINUE? (Y)/N:y

L81 ANSWER 33 OF 40 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN  
 ACCESSION NUMBER: 2003-801305 [75] WPIX  
 DOC. NO. CPI: C2003-221270 [75]  
 TITLE: Improving functionalization of living polymer anions by  
 anionically polymerizing monomer(s) with  
 functionalized alkylolithium initiator(s) to  
 form living polymer anion(s), in the presence  
 organometallic compound(s)  
 DERWENT CLASS: A18; E12  
 INVENTOR: BROCKMANN T W; MEHTA V C  
 PATENT ASSIGNEE: (FMCC-C) FMC CORP  
 COUNTRY COUNT: 1

#### PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
US 20030114592	A1	20030619	(200375)*	EN	16[0]	

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
US 20030114592	A1	US 2001-4260	20011024

PRIORITY APPLN. INFO: US 2001-4260 20011024

INT. PATENT CLASSIF.:

IPC RECLASSIF.: C08C0019-00 [I,C]; C08C0019-44 [I,A]; C08F0036-00 [I,C];  
C08F0036-04 [I,A]

ECLA: C08C0019-44; C08F0036-04+4/48; C08F0036-04+4/50

USCLASS NCLM: 525/195.000

NCLS: 525/250.000; 525/254.000; 525/364.000; 525/366.000;  
 526/123.100; 526/177.000; 526/178.000; 526/187.000;  
 526/335.000

#### BASIC ABSTRACT:

US 20030114592 A1 UPAB: 20051007

NOVELTY - Improving functionalization of living polymer anions,  
 comprises anionically polymerizing monomer(s) in the presence of  
 functionalized alkylolithium initiator(s) to form living polymer anion(s), in  
 the presence of organometallic compound(s) capable of forming an ate complex

with a lithiated species in less than 10 mol% to impart thermal stability to the living polymer anions without inhibiting the reaction.

**DETAILED DESCRIPTION -** An INDEPENDENT CLAIM is also included for a polymer composition comprising anionically polymerized functionalized living polymers and organometallic compound(s) capable of forming an ate complex with an alkylolithium species.

**USE -** For improving functionalization of living polymer anions.

**ADVANTAGE -** The invention improves the thermal stability of living polymer anions, and the efficiency of subsequent functionalization and linking reactions of such living polymer anions. MANUAL CODE: CPI: A02-A07; A02-A07B; A04-B01A; A10-B01; E05-A; E05-B; E05-C02; E05-D; E05-E; E05-F; E05-L03D; E05-M; E05-N; E05-Q

#### TECH

**POLYMERS - Preferred Composition:** The organometallic compound is present at 0.001 to less than 10 (preferably 1-7) mol%, based on the amount of lithiated species present.

**Preferred Component:** The composition comprises a hydrocarbon solvent from (cyclo)alkanes, and/or aromatic solvents. The organometallic compound is soluble in hydrocarbon solvents.

**Preferred Process:** The process further comprises reacting the thermally stabilized living polymer anion with a functionalizing agent to form a polymer having terminal functional group(s); and optionally reacting the terminal functionalized group(s) with comonomer(s) to form a polymer segment. It also comprises linking the thermally stabilized living polymer anions with a linking agent to form a star or multi-branched polymer.

#### ABEX SPECIFIC COMPOUNDS - 141 Functionalized alkylolithium initiators

are specifically claimed, e.g. 3-(*t*-butyldimethylsilyloxy)-1-propyllithium. The organometallic compound is diethylmagnesium, diisopropylmagnesium, dibutylmagnesium, dicyclohexylmagnesium, diphenylmagnesium, diethylzinc, dibutylzinc, diphenylzinc, triethylaluminum, tripropylaluminum, triisopropylaluminum, tributylaluminum, trioctylaluminum, trimethylboron, triethylboron or tributylboron.

**EXAMPLE - Initiator** was separated under argon to give Lot A as the control, which contained 2,2-dimethyl-3-trimethylsilyloxy-1-propyllithium (90 g) as 20 wt.% solution in cyclohexane; and Lot B, which contained 2,2-dimethyl-3-trimethylsilyloxy-1-propyllithium (112 g) as 20 wt.% solution in cyclohexane. Lot B was treated with dibutylmagnesium (0.93 g) or 5 mol% dibutylmagnesium relative to 2,2-dimethyl-3-trimethylsilyloxy-1-propyllithium. Both Lot A and Lot B were stored at room temperature for 25 days and then utilized as initiators. Polymerizations using Lot A (control) and Lot B (stabilized with dibutylmagnesium) were conducted and the results showed that Lot A had initiator efficiency of 64%, while Lot B had 80%.

L81 ANSWER 34 OF 40	WPIX COPYRIGHT 2008	THOMSON REUTERS on STN
ACCESSION NUMBER:	2000-579166 [54]	WPIX
DOC. NO. CPI:	C2000-172364 [54]	
TITLE:	New composition comprising alkyl lithium compounds and/or functionalized alkyl lithiums with one or additives for stabilizing chain ends of living polymers	
DERWENT CLASS:	A60; E12; E19	
INVENTOR:	DOVER T; GRANGER E J; LETCHFORD R J; QUIRK R P; SCHWINDEMAN J A	
PATENT ASSIGNEE:	(FMCC-C) FMC CORP	
COUNTRY COUNT:	89	

PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2000050478	A1	20000831	(200054)*	EN	49[0]	
AU 2000036098	A	20000914	(200063)	EN		
TW 552275	A	20030911	(200417)	ZH		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2000050478	A1	WO 2000-US5088	20000224
AU 2000036098	A	AU 2000-36098	20000224
TW 552275	A	TW 2000-103349	20000225

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 2000036098	A	Based on WO 2000050478 A

PRIORITY APPLN. INFO: US 1999-121536P 19990225

## INT. PATENT CLASSIF.:

IPC RECLASSIF.: C08F0012-00 [I,C]; C08F0012-04 [I,A]; C08F0036-00 [I,C];  
C08F0036-04 [I,A]; C08F0004-00 [I,C]; C08F0004-58  
 [I,A]

ECLA: C08F0012-04+4/58; C08F0036-04+4/58

## BASIC ABSTRACT:

WO 2000050478 A1 UPAB: 20060117

NOVELTY - A new composition with enhanced thermal stability comprises alkyl lithium compounds and/or functionalized alkyl lithium compounds along with one or more stabilizing additives.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is included for a process for preparing living polymer anions having improved thermal stability, comprising anionically polymerizing one or more monomers in the presence of one or more alkylolithium initiators and/or one or more functionalized alkylolithium initiators and in the presence of at least one additive selected from silyl ethers, germane ethers, tin ethers, silyl amines, germane amines, tin amines, alkyl silanes, aryl silanes, alkylarylsilanes, alkyl germanes, aryl germanes, alkylarylsilanes, alkyl tins, aryl tins, alkylarylsilanes, phenols and/or naphthols.

USE - For improving the stability of living polymer chain ends.

ADVANTAGE - Compositions have improved thermal stability. MANUAL CODE:

CPI: A02-A07B; A04-B01A; A04-C01A; A10-E; A10-E22;  
 A10-E22A; E05-A; E05-E01; E05-E02; E05-F01; E05-F02

## TECH

ORGANIC CHEMISTRY - Preferred Properties: The composition has a carbon bound lithium value of at least 90% and about 100 ntu (nephelometer turbidity units).

Preferred Additives: The additives are selected from silyl ethers, germane ethers, tin ethers, silyl amines, germane amines, tin amines, alkyl silanes, aryl silanes, alkylarylsilanes, alkyl germanes, aryl germanes, alkylarylsilanes, alkyl tins, aryl tins, alkylarylsilanes, phenols and naphthols.

Preferred Silyl Ethers: The silyl ethers are selected from 1-(t-butyldimethylsilyloxy)propane, 1-(t-butyldimethylsilyloxy)butane, 1-(t-butyldimethylsilyloxy)hexane, 1-(t-butyldimethylsilyloxy)-2-ethylhexane, 1-(t-butyldimethylsilyloxy)octane, 2-(t-butyldimethylsilyloxy)propane, 2-(t-butyldimethylsilyloxy)butane, 2-(t-

butyldimethylsilyloxy)hexane, 2-(t-butyldimethylsilyloxy)octane, 1,4-(bis-(t-butyldimethylsilyloxy))butane, 1,4-cyclohexanedimethanol-(bis-(t-butyldimethylsilyl)) ether, etc., (28 further compounds are given.)

Preferred Silyl Amines: The silyl amines are selected from one or more of heptamethyldisilazane, diethylaminotrimethylsilane, diethylaminotriisopropylsilane, N-(t-butyldimethylsilyl)-N-methylaniline, N-methyl-N-(trimethylsilyl)-aniline, N,N-(bis-(trimethylsilyl)aniline, and 1-propyl-(2,2,5,5-tetramethyl-2,5-disila-1-azacyclopentane).

Preferred Aryl Silanes: The aryl silanes are selected from one or more of tetraphenylsilane, diphenylsilane and 1-naphthyltriphenylsilane.

Preferred Alkylaryl Silanes: The alkylaryl silanes are selected from dimethyldiphenylsilane, phenyltrimethylsilane, 1,4-(bis(trimethylsilyl))benzene, methylphenylsilane, dimethylphenylsilane and phenyltriisopropylsilylane.

Preferred Alkyl Germanes: The alkyl germanes are selected from tetraphenylgermane, diphenylgermane and 1-naphthyltriphenylgermane.

Preferred Alkylaryl Germanes: The alkylaryl germanes are selected from dimethyldiphenylgermane, phenyltrimethylgermane and dimethylphenylgermane.

Preferred Alkyl Tins: The alkyl tins are selected from tetramethyltin, tetra-n-butylin and diethyldimethyltin.

Preferred Aryl Tins: The aryl tins are selected from tetraphenyltin, triphenyltin and 1-naphthyltriphenyltin.

Preferred Alkylaryl Tins: The alkylaryl tins are selected from dimethyldiphenyltin, phenyltrimethyltin and dimethylphenyltin.

Preferred Alkyllithiums: The alkyllithiums are selected from one or more of methylolithium, ethylolithium, n-propyllithium, 2-propyllithium, n-butyllithium, sec-butyllithium, tert-butyllithium, n-hexyllithium, 2-ethylhexyllithium and 1-octyllithium.

Preferred Functionalized Alkyl Lithiums: The functionalized alkyllithiums are selected from one or more of 3-(t-butyldimethylsilyloxy)-1-propyllithium, 3-(t-butyldimethylsilyloxy)-2-methyl-1-propyllithium, 3-(t-butyldimethylsilyloxy)-2,2-dimethyl-1-propyllithium, 3-(t-butyldimethylsilyloxy)-1-butyllithium, 5-(t-butyldimethylsilyloxy)-1-pentyllithium, 6-(t-butyldimethylsilyloxy)-1-hexyllithium, 8-(t-butyldimethylsilyloxy)-1-octyllithium, 3-(t-butyldimethylsilyloxy)-1-propyllithium, 3-(t-butyldiphenylsilyloxy)-2-methyl-1-propyllithium, 3-(t-butyldiphenylsilyloxy)-2,2-dimethyl-1-propyllithium, 6-(t-butyldiphenylsilyloxy)-1-hexyllithium, 3-(trimethylsilyloxy)-2,2-dimethyl-1-propyllithium, 3-(1,1-dimethylethoxy)-1-propyllithium, 3-(1,1-dimethylethoxy)-2-methyl-1-propyllithium, 3-(1,1-dimethylethoxy)-2,2-dimethyl-1-propyllithium, 4-(1,1-dimethylethoxy)-1-butyllithium, 5-(1,1-dimethylethoxy)-1-pentyllithium, 6-(1,1-dimethylethoxy)-1-hexyllithium, 8-(1,1-dimethylethoxy)-1-octyllithium, 3-(1,1-dimethylpropoxy)-1-propyllithium, 3-(1,1-dimethylpropoxy)-2-methyl-1-propyllithium, 3-(1,1-dimethylpropoxy)-2,2-dimethyl-1-propyllithium, 4-(1,1-dimethylpropoxy)-1-butyllithium, 5-(1,1-dimethylpropoxy)-1-pentyllithium, 6-(1,1-dimethylpropoxy)-1-hexyllithium, 8-(1,1-dimethylpropoxy)-1-octyllithium, 4-(methoxy)-1-butyllithium,

4-(ethoxy)-1-butyllithium, 4-(n-propyloxy)-1-butyllithium, 4-(1-methylethoxy)-1-butyllithium, 3-(3-(dimethylamino)-1-propyloxy)-1-propyllithium, 3-(2-(dimethylamino)-1-ethoxy)-1-propyllithium, etc., (105 further compounds are given).

Preferred Solvent: The solvent is selected from one or more of alkanes, cycloalkanes and aromatics.

Preferred Phenols and Naphthols: The phenols and naphthols are selected from one or more of phenol, 1-naphthol, 2-naphthol, 4-(t-butyl)-phenol, catechol, 2-methylphenol, 3-methylphennol, 4- methylphenol, 2,6-(di-t-butyl)-4-methylphenol, 4-methoxyphenol, 4-methoxy-1-naphthol, bisphenol A and 2,7-dihydroxy-naphthene.

ABEX EXAMPLE - A 1000 ml glass reactor was equipped with one break-seal reagent ampoule, a sampling port attached with a polytetrafluroethylene stopcock, an inlet tube fitted with a septum cap, and a magnetic stir bar. This reactor was flame sealed to a high vacuum line, and evacuated at 120degreesC for 8 hours. The flask was refilled with dry argon, and allowed to cool to room temperature. 3-(t-Butyldimethylsilyloxy)-1- propyllithium 17.93 wt.% in cyclohexane, 3.60 grams (20 mmoles) was added to the reactor with a syringe via the inlet tube. Cyclohexane, 585 nil., was then vacuum distilled directly into the reactor. The flask was then removed from the vacuum line by a flame seal. The monomer, purified 1,3-butadiene, 40 grams (740 mmole) was added from the ampoule. The reaction mixture was then placed in a constant temperature bath at 30degreesC, until all of the 1,3-butadiene had been consumed, about 15 hours.

L81 ANSWER 35 OF 40 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN  
 ACCESSION NUMBER: 1997-145633 [13] WPIX  
 DOC. NO. CPI: C1997-046544 [13]  
 TITLE: Preparation of functionalised telechelic star polymers for use  
 as base material in e.g. coatings and sealants - involves step of polymerising conjugated diene monomer(s) and/or alkenylaromatic cpd(s). and/or diene monomer(s) with alkenylaromatic cpd(s). using protected functionalised initiator  
 DERWENT CLASS: A12; A28; E11; E12; G02; G03; H07  
 INVENTOR: KAMIENSKI C W; LETCHFORD R J; SCHWINDEMAN J A  
 PATENT ASSIGNEE: (FMCC-C) FMC CORP  
 COUNTRY COUNT: 69

#### PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9705180	A1	19970213	(199713)*	EN	39[0]	
AU 9666035	A	19970226	(199725)	EN		
EP 842206	A1	19980520	(199824)	EN		
US 5919870	A	19990706	(199933)	EN		
EP 842206	B1	20030416	(200328)	EN		
DE 69627501	E	20030522	(200341)	DE		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9705180 A1		WO 1996-US12407	19960729
US 5919870 A	Provisional	US 1995-1689P	19950731
US 5919870 A		US 1996-660658	19960605
AU 9666035 A		AU 1996-66035	19960729

DE 69627501 E	DE 1996-69627501 19960729
EP 842206 A1	EP 1996-925555 19960729
EP 842206 B1	EP 1996-925555 19960729
DE 69627501 E	EP 1996-925555 19960729
EP 842206 A1	WO 1996-US12407 19960729
EP 842206 B1	WO 1996-US12407 19960729
DE 69627501 E	WO 1996-US12407 19960729

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 69627501 E	Based on	EP 842206 A
AU 9666035 A	Based on	WO 9705180 A
EP 842206 A1	Based on	WO 9705180 A
EP 842206 B1	Based on	WO 9705180 A
DE 69627501 E	Based on	WO 9705180 A
PRIORITY APPLN. INFO: US 1996-660658		19960605
		US 1995-1689P
		19950731
INT. PATENT CLASSIF.:		
IPC RECLASSIF.:	C08C0019-00 [I,C]; C08C0019-44 [I,A]; C08F0036-00 [I,C]; C08F0036-04 [I,A]; C08F0004-00 [I,C]; C08F0004-46 [I,A]; C08F0004-72 [I,A]; C08F0008-00 [I,A]; C08F0008-00 [I,C]	
ECLA:	C08C0019-44; C08F0004-46; C08F0004-72; C08F0008-00; C08F0036-04+4/46; C08F0036-04+4/72	
BASIC ABSTRACT:		
WO 1997005180 A1	UPAB: 20060112	Preparation of functionalised telechelic multi-arm (star)-polymers comprises:  (a) <u>polymerising</u> a monomer selected from a conjugated diene monomer or mixture thereof, an alkenylaromatic cpd. or mixture thereof and a mixture of one or more diene monomers together with one or more alkenylaromatic cpds., in a liquid reaction medium, at -30 - 150°C for at least 1 hr., with a protected functionalised <u>initiator</u> of formula (I) to produce protected 'living' polymer anions; M-Qn-Z-T-(A-R1R2R3) <sup>m</sup> (I) M = Li, Na or K; Q = unsaturated hydrocarbyl gp. derived by incorporation of a conjugated diene hydrocarbon(s), an alkenylaromatic cpd(s). or mixts. of a diene(s) with an alkenylaromatic cpd(s). into the M-Z linkage; Z = opt. branched 3-25C hydrocarbon connecting gp.; T = O, S or N; (A-R1R2R3) <sup>m</sup> = a protecting gp.; A = Group IVa element, pref. C or Si; R1-R3 = H, alkyl or aryl gps., opt. substd. with lower alkyl, lower alkylthio and lower dialkylamino gps. or 5-12C opt. substd. cycloalkyl gps.; n = integer of 0-5; and m = 1 when T = O or S and = 2 when T = N; (b) reacting with a cpd. selected from difunctional cpds. and/or polyfunctional cpds. at 20-135°C for at least 1 hr., to produce multi-arm star polymers; (c) removing the protecting gp. to produce functionalised telechelic star polymers with O, S or N gps. on the bend of each end of the each arm of the star polymers; (d) reacting these terminal functional gps. with selected difunctional or polyfunctional comonomer or comonomers selected from organic dicarboxylic acids, organic polycarboxylic acids, organic diisocyanates, organic polyisocyanates, organic diamids, organic polyamids, organic polyols, ethylene oxide in the presence of potassium butoxide, methacryloyl chloride and <u>styrenedimethylchlorosilane</u> which is subsequently reacted with a free radically <u>polymerisable</u> monomer; and (e) recovering the multi-arm star polymers from the reaction medium.

Also claimed is a functionalised telechelic star polymer prepared as above.

USE - The star polymers are used as base materials for coatings, sealants, binders and block copolymers with polyesters, polyamides and polycarbonates. Obtd. moulding resins can be used for exterior automotive components.

ADVANTAGE - The star polymers improve the flexibility and impact strength of base materials. Sulphonated styrene and/or 4-vinyl pyridine can be polymerised by free radical initiators onto the terminal alkenyl gps. at (T) to produce functional polymer segments which can improve the dispersibility of the star polymers in lubricating oils (claimed).

MANUAL CODE: CPI: A02-A07B; A02-B; A04-B01A; A04-C01A; A12-B01C;  
A12-B01G; A12-R08; E05-A; G02-A02D1; G02-A02D4; G04-B02;  
H07-G03

L81 ANSWER 36 OF 40 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN

ACCESSION NUMBER: 1997-145632 [13] WPIX

DOC. NO. CPI: C1997-046543 [13]

TITLE: Multi-branched or star-shaped polymers with mixed functional and non-functional ends - prepared by polymerising conjugated alkadiene with alkyl- and protected functional organo-lithium initiators:

DERWENT CLASS: A12; A18; A28; E11; E12; G02; G03; H07

INVENTOR: QUIRK R P

PATENT ASSIGNEE: (FMCC-C) FMC CORP

COUNTRY COUNT: 69

#### PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 9705179	A1	19970213	(199713)*	EN	82[0]	
AU 9666819	A	19970226	(199725)	EN		
US 5798418	A	19980825	(199841)	EN		

#### APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 9705179 A1		WO 1996-US12380	19960729
US 5798418 A	Provisional	US 1995-1687P	19950731
US 5798418 A		US 1996-683487	19960718
AU 9666819 A		AU 1996-66819	19960729

#### FILING DETAILS:

PATENT NO	KIND	PATENT NO
AU 9666819 A	Based on	WO 9705179 A

PRIORITY APPLN. INFO: US 1996-683487 19960718  
US 1995-1687P 19950731

INT. PATENT CLASSIF.:  
IPC RECLASSIF.: C08C0019-00 [I,C]; C08C0019-44 [I,A]; C08F0012-00 [I,C];  
C08F0012-06 [I,A]; C08F0297-00 [I,C]; C08F0297-04 [I,A];  
C08F0036-00 [I,C]; C08F0036-04 [I,A];  
C08F0004-00 [I,C]; C08F0004-46 [I,A]; C08F0004-72 [I,A];  
C08G0081-00 [I,C]; C08G0081-02 [I,A]; C08G0083-00 [I,A];  
C08G0083-00 [I,C]

ECLA: C08C0019-44; C08F0004-46A; C08F0004-72; C08F0012-06;

## BASIC ABSTRACT:

WO 1997005179 A1 UPAB: 20060112

Multi-branched or star-shaped polymers having mixed functional and non-functional ends are produced by a process comprising: (a) polymerising conjugated alkadienes, of butadiene, isoprene or alkanyl substd. aromatic cpds. of ( $\alpha$ -methyl) styrene, singly, sequentially, or as mixts., in a liquid reaction medium, at a temp. of  $-30^{\circ}$  -  $150^{\circ}$  C for a period of hr(s), with mixts of: (i) alkyl lithium initiators of n-, sec- or tert.-butyl lithium; and (ii) protected functional organolithium initiators of formula (I) to give protected living polymer anions; (b) reacting the living polymer anions with a polyfunctional linking cpd. of silicon- or tri-tetrachloride, phosphorus trichloride, isomeric di-isopropenyl-or isomeric divinyl-benzene, or mixts. of the cpds. at a temperature of  $20$ - $135^{\circ}$  C, for a period of hr(s). to give multi-arm star polymers, and terminating with a protic terminating agent; (c) removing the protecting gp. to give functionalised multicholic multi-arm or star polymers with hydroxyl, sulphhydryl or amino gps. on the end of some of the arms of the multi-arm or star polymers; (d) reacting the functionalised gps. on the ends of the arms of the multi-arm or star polymers with a di- or polyfunctional comonomer or comonomers of organic di- or polycarboxylic acids, organic di- or polyisocyanates, organic di- or polyamides, cyclic amides, organic di- or polyols, ethylene oxide in the presence of potassium butoxide, or (meth)acryloyl chloride, or styrenyldimethylchlorosilane, the last 3 of which are then copolymerised with a free radically polymerisable monomer; and (e) recovering the multi-arm star polymers from the reaction medium. Q = unsatd hydrocarbyl gp. derived by including conjugated diene hydrocarbon(s), alkenyl aromatic cpd(s), or mixture into the Li-Z linkage at a C-L bond; Z = opt branched 3-25C hydrocarbyl connecting gp.; T = element of oxygen, sulphur or nitrogen;  $(A-R1R2R3)m$  = protecting gp.; A = element of Gp. IVa, eg, C and Si; R1,-R3 = H, alkyl, substd. alkyl containing lower alkyl(thio) or lower dialkylamino gps., aryl or substd. aryl containing lower alkyl(thio) or lower dialkylamino gps. or 5-12C (substd) cycloalkyl gps.; m = 1 when T is oxygen or sulphur and 2 when T is nitrogen; and n = 0-5. Also claimed are: (i) multi-branched or star-shaped polymers having mixed functional and non-functional ends produced by a process comprising separately producing protected living polymer anions; (ii) the process to produce multi-branched or star-shaped polymers; (iii) the process to prepare multi-branched or star-shaped polymers by separately producing protected living polymer anions; and (iv) a process for modifying the surface adhesion properties of polyolefins comprising melt mixing the functional polymer with a polyolefin at a level of 1-25 weight% based on the polyolefin.

USE - The protected hydroxy multi-arm star polymers are used as base materials to produce coatings, sealants, binders and block copolymers with polyesters, polyamides and polycarbonates, useful as moulding cpds. for exterior automotive components, or adhesive, toughening polymers for epoxy composites, heterophase polymer network systems, hydrogels, viscosity improvers or compatibilisers for polymer waste recycling.

ADVANTAGE - The mol. architecture of the cpds. can be more precisely controlled, and the ratio of protected to functionalised to non-functionalised arms can be adjusted. The monomer identity, the monomer compsn. and mol. weight of the functional arms can be independently manipulated, and the number of polymer arms can be adjusted by varying the nature of the coupling agent, and the ratio of living polymer to coupling agent.

MANUAL CODE: CPI: A02-A07; A04-B01A; A10-E01; E05-A; G03-B02; H07-G06

=> d bib ab ind 37-40

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' - CONTINUE? (Y)/N:y

L81 ANSWER 37 OF 40 RAPRA COPYRIGHT 2008 RAPRA on STN  
 AN R:621085 RAPRA FS Rapra Abstracts Full-text  
 TI RECENT ADVANCES IN THE DEVELOPMENT OF AROMATIC POLYMERS WITH IMPROVED  
 PROPERTIES. I. NEW METHODS FOR THE SYNTHESIS OF AROMATIC POLYAMIDES AND  
 POLYIMIDES.  
 AU Lozano A E; de la Campa J G (Instituto de Ciencia y Tecnologia de  
 Polimeros)  
 SO Revista de Plasticos Modernos 70, No.470, Aug.1995, p.141-53  
 ISSN: 0034-8708  
 CODEN: RPMOAM  
 PY 1995  
 DT Journal  
 LA Spanish  
 AB Developments in polymerisation methods for the synthesis of aromatic  
 polyamides and polyimides are reviewed. These include the synthesis of  
 polyamides using nucleophilic and electrophilic activation, activation with  
 phosphorus and benzazole compounds and organometallic compounds as  
polymerisation catalysts, the use of silylated diamines in the synthesis of  
 polyamides and polyimides, synthesis of polyimides by direct  
 polycondensation, and synthesis of polyetherimides from aromatic diphenols.  
 109 refs.  
 AN R:621085 RAPRA FS Rapra Abstracts Full-text  
 CC 43C318; 43C4; 43C5; 72221; 723  
 SC \*KR; KB; KS  
 CT ACTIVATION; ACTIVATOR; ACYLATING AGENT; ACYLATION; AMIDE POLYMER;  
 AMORPHOUS; ANALYSIS; APROTIC; AROMATIC; CATALYST; CHARGE-TRANSFER  
 COMPLEX; CHEMICAL MODIFICATION; CHEMOSELECTIVITY; COMPANIES; COMPANY;  
 CONDENSATION POLYMERISATION; CONDENSATION POLYMERIZATION; CROSSLINK;  
 CRYSTALLISATION; CRYSTALLIZATION; CYCLODEHYDRATION; DATA; DEGREE OF  
 CONVERSION; DEGREE OF POLYMERISATION; DEGREE OF POLYMERIZATION;  
 DEHYDRATION; ELECTRON ACCEPTOR; ELECTRON DENSITY; ELECTRONEGATIVITY;  
 ELECTROPHILIC; ENGINEERING APPLICATION; ENGINEERING PLASTIC; FIBER;  
 FIBRE; FILM; FILMS; FUNCTIONAL GROUP; GRAPH; HEAT RESISTANCE; HYDROLYSIS;  
 IMIDE GROUP; IMIDE POLYMER; IMIDISATION; IMIDIZATION; IN-SITU;  
 INSTITUTION; LEWIS ACID; MODIFICATION; MOLEC.WT.; MOLECULAR MASS;  
 MOLECULAR ORBITAL; MOLECULAR WEIGHT; NMR SPECTROSCOPY; NUCLEAR MAGNETIC  
 RESONANCE; NUCLEOPHILIC; NYLON; PEI; PHOSPHORYLATION; PLASTIC; POLAR  
 SOLVENT; POLYAMIC ACID; POLYAMIDATION; POLYAMIDE; POLYARAMID;  
 POLYARAMIDE; POLYCONDENSATION; POLYESTERAMIDE; POLYETHERIMIDE; POLYIMIDE;  
 POLYMERISATION; POLYMERISATION CATALYST; POLYMERISATION CATALYSTS;  
 POLYMERISATION MECHANISM; POLYMERISATION RATE; POLYMERISATION  
 TEMPERATURE; POLYMERISATION TIME; POLYMERIZATION; POLYMERIZATION  
 CATALYST; POLYMERIZATION MECHANISM; POLYMERIZATION RATE; POLYMERIZATION  
 TEMPERATURE; POLYMERIZATION TIME; POLYPHENYLENE TEREPHTHALAMIDE;  
 POLYPYROMELLITIMIDE; PROPERTIES; PROTON ABSTRACTION; RATE OF  
 POLYMERISATION; REACTIVITY; REVIEW; RHEOLOGICAL PROPERTIES; RHEOLOGY;  
 SIDE REACTION; SILATION; SILYLATION; SOLUBILITY; SOLUTION POLYMERISATION;  
 SOLUTION POLYMERIZATION; SOLVENT; STABILITY; STEP POLYMERISATION; STEP  
 POLYMERIZATION; STOICHIOMETRY; TECHNICAL; THERMAL PROPERTIES; THERMAL  
 STABILITY; THERMOPLASTIC; VISCOSITY  
 NPT ACID CHLORIDE; ACID DICHLORIDE; AMIDE GROUP; AMINE; BENZAZOLE; DIAMIDE;  
 DIAMINE; DIANHYDRIDE; DIESTER; DIPHENOL; IODINE COMPOUND; LITHIUM  
 CHLORIDE; METHYL PYRROLIDINONE; ORGANOMETALLIC COMPOUND; PALLADIUM  
 COMPOUND; PHENYLENE DIAMINE; PHOSPHOROUS COMPOUND; PHOSPHORUS COMPOUND;  
 PYRIDINE; PYRIDINIUM SALT; TEREPHTHALOYL CHLORIDE; TRIMETHYLSILYL  
 CHLORIDE; TRIPHENYL PHOSPHITE; TRIPHENYLPHOSPHITE

SHR CONDENSATION POLYMERISATION, amide polymers, aramid polymers, polymerisation catalysts, etherimide polymers, imide polymers; AMIDE POLYMERS, condensation polymerisation, polymerisation catalysts; ARAMID POLYMERS, condensation polymerisation, polymerisation catalysts; POLYMERISATION CATALYSTS, condensation polymerisation, amide polymers, aramid polymers; IMIDE POLYMERS, condensation polymerisation; ETHERIMIDE POLYMERS, condensation polymerisation

GT EUROPEAN COMMUNITY; EUROPEAN UNION; SPAIN; WESTERN EUROPE

L81 ANSWER 38 OF 40 COMPENDEX COPYRIGHT 2008 EEI on STN

AN 2007(40):7429 COMPENDEX Full-text

TI Oxidative coupling polymerization of phenol derivatives catalyzed with copper-amine complexes immobilized within mesoporous interiors.

AU Shibusaki, Yuji (Department of Organic and Polymeric Materials Graduate School of Science and Engineering Tokyo Institute of Technology, Meguro-ku, Tokyo 152-8552, Japan)

SO Kobunshi Ronbunshu v 64 n 8 August 2007 2007.p 475-485

ISSN: 0386-2186

PY 2007

DT Journal

TC Experimental

LA Japanese

AB A mesoporous silica, SBA-15, was modified with a diamine having a silan- coupling group, followed by the coordination of CuCl for the oxidative coupling polymerization of phenol derivatives. The prepared catalyst was characterized by XRD, N<sub>2</sub> absorption-desorption analysis, elemental analysis, and ICP analysis; the copper ion was found to be dispersed homogeneously inside the channel. The mesoporous-supported copper-amine catalyst (SBA-15-Cu) was then applied to the polymerization of 2,6-dimethylphenol in order to investigate the ability of the catalyst. The corresponding poly (2,6-dimethyl-1,4-phenylene ether) was obtained in good yield with the number average molecular weight of 19000, which was lower than the conventional homogeneous catalyst. The durability of the SBA-15-Cu catalyst was proved for at least five repetitions the polymerization. The catalyst was then applied to the 2,5-dimethylphenol and o-cresol polymerization, where the coupling selectivity was further improved compared to the conventional homogeneous catalyst, indicating the usefulness of the mesoporous supported catalyst. The properties of the resulting polymers were also discussed. 34 Refs.

AN 2007(40):7429 COMPENDEX Full-text

CC 544.1 Copper; 802.2 Chemical Reactions; 804.1 Organic Compounds; 804.2 Inorganic Compounds; 815.2 Polymerization

CT \*Phenols; Catalysis; Catalyst selectivity; Copper; Oxidation; Polymerization; Silica; Amines

ST Oxidative coupling polymerization; Mesoporous silica

ET Cl\*Cu; CuCl; Cu cp; cp; Cl cp; N; Cu

L81 ANSWER 39 OF 40 JAPIO (C) 2008 JPO on STN

AN 1999-228584 JAPIO Full-text

TI PRODUCTION OF AMINOALKOXYSILANE

IN IGAI SHIGERU; YANO TAKEFUMI

PA UBE IND LTD

PI JP 11228584 A 19990824 Heisei

AI JP 1998-31632 (JP10031632 Heisei) 19980213

PRAI JP 1998-31632 19980213

SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1999

AB PROBLEM TO BE SOLVED: To produce the subject compound useful as a polymerization catalyst component, etc., in high yield by reacting magnesium with a halogenated hydrocarbon and a secondary amine, producing a magnesium amide compound and then reacting the resultant magnesium amide compound with an alkoxy silane.

SOLUTION: Magnesium is reacted with a halogenated hydrocarbon (e.g. n-butyl chloride) and a secondary amine (e.g. perhydroisoquinoline) in a solvent such as tetrahydrofuran to produce a magnesium amide compound in the first step. The resultant magnesium amide compound is then reacted with an alkoxy silane (e.g. tetramethoxysilane) under heating in the second step to thereby afford the objective aminoalkoxysilane compound, especially a di(polycyclic amino)  
dialkoxysilane [e.g. di(perhydroisoquinolyl) dimethoxysilane] in high yield according to a simple process. The resultant compound as a polymerization catalyst component is capable of producing a polymer having high stereoregularity in polymerization of an &alpha;-olefin. COPYRIGHT:

(C)1999, JPO

IC ICM C07F007-18

L81 ANSWER 40 OF 40 JAPIO (C) 2008 JPO on STN  
 AN 1991-100003 JAPIO Full-text  
 TI PREPARATION OF CONJUGATED DIENE POLYMER  
 IN KATSUMATA HIDEO; TAKASHIMA AKIO; HATTORI IWAKAZU  
 PA JAPAN SYNTHETIC RUBBER CO LTD  
 PI JP 03100003 A 19910425 Heisei  
 AI JP 1989-235742 (JP01235742 Heisei) 19890913  
 PRAI JP 1989-235742 19890913  
 SO PATENT ABSTRACTS OF JAPAN (CD-ROM), Unexamined Applications, Vol. 1991  
 AB PURPOSE: To prepare a high-mol.-weight conjugated diene polymer having a high trans-1,4 bond content and a low vinyl bond content easily at a high polymerization reactivity by polymerizing a monomer mainly comprising a conjugated diene in the presence of a specific catalyst compsn. CONSTITUTION: A conjugated diene polymer is prepared by polymerizing a monomer mainly comprising a conjugated diene in an inert organic solvent in the presence of a catalyst compsn. containing a Ba compound, an organoaluminum compound, an organolithium compound, an amine of formula I (wherein R<SP>1</SP> and R<SP>2</SP> are each 1-20C alkyl, 6-20C aryl, or 3-20C alkylsilyl), a diamine of formula II (wherein R<SP>3</SP> to R<SP>6</SP> are each the same as R<SP>1</SP> and R<SP>2</SP>; and R<SP>7</SP> is 1-20C arylene) and/or an organoaluminum alkoxide compound of formula III (wherein r<SP>8</SP> is 1-20C aryl or an oxygen- and/or nitrogen-containing hydrocarbon residue; R<SP>9</SP> is 1-20C alkyl or 6-20C aryl; and (n) is 1-3). Thus the conjugated diene polymer, excellent in the abrasion resistance and mechanical properties (especially high-temperature tensile strength) and having a high trans-1,4 bond content, a low 1,2- or 3,4-vinyl bond content, is obtd. at a high polymerization reactivity. COPYRIGHT: (C)1991, JPO&Japio  
 IC ICM C08F004-54  
 ICS C08F036-04

=> d que nos 144

L1           1 SEA FILE=HCAPLUS ABB=ON PLU=ON US2007-599651/APPS  
 L3           TRANSFER PLU=ON L1 1- RN :           31 TERMS  
 L4           31 SEA FILE=REGISTRY ABB=ON PLU=ON L3  
 L7           STR  
 L9          44315 SEA FILE=REGISTRY SSS FUL L7  
 L10          QUE ABB=ON PLU=ON SUZUKI, E?/AU  
 L11          QUE ABB=ON PLU=ON OZAWA, Y?/AU  
 L12          QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE)) /  
              CS, SO, PA  
 L13          QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
 L14          QUE ABB=ON PLU=ON ?CATALY?  
 L15          QUE ABB=ON PLU=ON INITIAT? OR START?  
 L16          QUE ABB=ON PLU=ON "POLYMERIZATION CATALYSTS"+PFT, OLD, N  
              EW, NT/CT  
 L17          19109 SEA FILE=HCAPLUS ABB=ON PLU=ON L9  
 L18          974 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 AND L16  
 L19          630 SEA FILE=HCAPLUS ABB=ON PLU=ON L17 (L)(L13(L)(L14 OR L15))  
 L21          QUE ABB=ON PLU=ON ?DIENE? ?DIENYL OR ?BUTADIEN?  
 L22          QUE ABB=ON PLU=ON ?STYREN?  
 L23          1 SEA FILE=REGISTRY ABB=ON PLU=ON L4 AND PMS/CI  
 L24          48629 SEA FILE=HCAPLUS ABB=ON PLU=ON L23  
 L25          6 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND (L18 OR L19)  
 L26          27 SEA FILE=HCAPLUS ABB=ON PLU=ON L24 AND L17  
 L27          27 SEA FILE=HCAPLUS ABB=ON PLU=ON (L25 OR L26)  
 L28          26 SEA FILE=HCAPLUS ABB=ON PLU=ON L27 AND ((L13 OR L14 OR L15  
              OR L16) OR (L21 OR L22))  
 L29          27 SEA FILE=HCAPLUS ABB=ON PLU=ON (L27 OR L28)  
 L30          3 SEA FILE=HCAPLUS ABB=ON PLU=ON L29 AND (L10 OR L11 OR L12)  
 L31          0 SEA FILE=HCAPLUS ABB=ON PLU=ON L1 AND L30  
 L32          4 SEA FILE=HCAPLUS ABB=ON PLU=ON (L30 OR L31) OR L1  
 L37          QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
 L38          QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W)(AMINE OR AMINO))  
 L39          QUE ABB=ON PLU=ON AMINES+PFT, OLD, NEW/CT (L) L38  
 L40          71 SEA FILE=HCAPLUS ABB=ON PLU=ON L39 (L)L37  
 L41          5 SEA FILE=HCAPLUS ABB=ON PLU=ON L40 AND (L16 OR (L13(5A)(L14  
              OR L15)))  
 L42          1 SEA FILE=HCAPLUS ABB=ON PLU=ON L41 AND (L10 OR L11 OR L12)  
 L43          1 SEA FILE=HCAPLUS ABB=ON PLU=ON L42 AND L1  
 L44          4 SEA FILE=HCAPLUS ABB=ON PLU=ON L43 OR L32

=> d que nos 155

L10          QUE ABB=ON PLU=ON SUZUKI, E?/AU  
 L11          QUE ABB=ON PLU=ON OZAWA, Y?/AU  
 L12          QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE)) /  
              CS, SO, PA  
 L48          STR  
 L50          SCR 1967 OR 1936  
 L52          1306 SEA FILE=CASREACT SSS FUL (L50 AND L48) ( 10185 REACTIONS)  
 L55          2 SEA FILE=CASREACT ABB=ON PLU=ON L52 AND (L10 OR L11 OR L12)

=> d que 169

L2          1 SEA FILE=WPIX ABB=ON PLU=ON US2007-599651/APPS  
 L10          QUE ABB=ON PLU=ON SUZUKI, E?/AU  
 L11          QUE ABB=ON PLU=ON OZAWA, Y?/AU  
 L12          QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE)) /

CS, SO, PA  
 L13           QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
 L14           QUE ABB=ON PLU=ON ?CATALY?  
 L15           QUE ABB=ON PLU=ON INITIAT? OR START?  
 L21           QUE ABB=ON PLU=ON ?DIENE? ?DIENYL OR ?BUTADIEN?  
 L22           QUE ABB=ON PLU=ON ?STYREN?  
 L37           QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
 L38           QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W) (AMINE OR AMINO))  
 L57           QUE ABB=ON PLU=ON C08F0036-04/IPC  
 L58           QUE ABB=ON PLU=ON C08F0004-08/IPC  
 L59           QUE ABB=ON PLU=ON C08F0004-10/IPC  
 L61           230 SEA FILE=WPIX ABB=ON PLU=ON (F09/PLE (S) SI/PLE)(P)C293/PLE  
 L62           6 SEA FILE=WPIX ABB=ON PLU=ON L61 AND L57  
 L63           2 SEA FILE=WPIX ABB=ON PLU=ON L61 AND (L58 OR L59)  
 L64           6 SEA FILE=WPIX ABB=ON PLU=ON (L62 OR L63)  
 L65           6 SEA FILE=WPIX ABB=ON PLU=ON L64 AND ((L13 OR L14 OR L15) OR  
               (L21 OR L22) OR (L37 OR L38))  
 L66           6 SEA FILE=WPIX ABB=ON PLU=ON (L64 OR L65)  
 L67           2 SEA FILE=WPIX ABB=ON PLU=ON L66 AND (L10 OR L11 OR L12)  
 L68           1 SEA FILE=WPIX ABB=ON PLU=ON L2 AND L67  
 L69           2 SEA FILE=WPIX ABB=ON PLU=ON (L67 OR L68)

=> d his 174

(FILE 'ANTE, EMA, APOLLIT, RAPRA, INSPEC, COMPENDEX, MEDLINE, BIOSIS,  
 EMBASE, PASCAL, SCISEARCH, CONFSCI, DISSABS, RDISCLOSURE' ENTERED AT  
 14:45:25 ON 24 OCT 2008)

L74           0 S L73 AND L10-L12

=> d que 174

L10           QUE ABB=ON PLU=ON SUZUKI, E?/AU  
 L11           QUE ABB=ON PLU=ON OZAWA, Y?/AU  
 L12           QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE))/  
               CS, SO, PA  
 L13           QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
 L14           QUE ABB=ON PLU=ON ?CATALY?  
 L15           QUE ABB=ON PLU=ON INITIAT? OR START?  
 L37           QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
 L38           QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W) (AMINE OR AMINO))  
 L71           829 SEA L38(5A) L37  
 L72           153786 SEA L13 (5A) (L14 OR L15)  
 L73           2 SEA L71 (15A) L72  
 L74           0 SEA L73 AND (L10 OR L11 OR L12)

=> dup rem 144 155 169 174

L74 HAS NO ANSWERS

DUPLICATE IS NOT AVAILABLE IN 'RDISCLOSURE'.

ANSWERS FROM THESE FILES WILL BE CONSIDERED UNIQUE

FILE 'HCAPLUS' ENTERED AT 15:06:17 ON 24 OCT 2008

USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.

PLEASE SEE "HELP USAGETERMS" FOR DETAILS.

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FILE 'CASREACT' ENTERED AT 15:06:17 ON 24 OCT 2008

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COPYRIGHT (C) 2008 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'WPIX' ENTERED AT 15:06:17 ON 24 OCT 2008

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PROCESSING COMPLETED FOR L55  
PROCESSING COMPLETED FOR L69  
PROCESSING COMPLETED FOR L74

L82            7 DUP REM L44 L55 L69 L74 (1 DUPLICATE REMOVED)  
              ANSWERS '1-4' FROM FILE HCPLUS  
              ANSWERS '5-6' FROM FILE CASREACT  
              ANSWER '7' FROM FILE WPIX

=> file stnguide  
FILE 'STNGUIDE' ENTERED AT 15:06:32 ON 24 OCT 2008  
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FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Oct 17, 2008 (20081017/UP).

=> d ibib ed abs hitind hitstr 1-4

YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX' - CONTINUE? (Y)/N:y

L82 ANSWER 1 OF 7 HCAPLUS COPYRIGHT 2008 ACS on STN DUPLICATE 1  
 ACCESSION NUMBER: 2005:1130679 HCAPLUS Full-text  
 DOCUMENT NUMBER: 143:406961  
 TITLE: Modified conjugated diene polymers having low heat buildup property, polymerization initiators therefor, their manufacture and rubber compositions  
 INVENTOR(S): Suzuki, Eiju; Ozawa, Yoichi  
 PATENT ASSIGNEE(S): Bridgestone Corporation, Japan  
 SOURCE: PCT Int. Appl., 44 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005097845	A1	20051020	WO 2005-JP4810	20050317
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1734060	A1	20061220	EP 2005-720997	20050317
R: DE, FR, IT				
CN 1961011	A	20070509	CN 2005-80017367	20050317
BR 2005009641	A	20070918	BR 2005-9641	20050317
US 20080033110	A1	20080207	US 2007-599651	20070713 <--
PRIORITY APPLN. INFO.:			JP 2004-111231	A 20040405
			WO 2005-JP4810	W 20050317

OTHER SOURCE(S): MARPAT 143:406961

ED Entered STN: 21 Oct 2005

AB Title conjugated diene (CD) homopolymers or the CD-aromatic vinyl compound (AV) copolymers are characterized as R1Y1NQR2(Poly)Z1 [R1, R2 = C1-20 alkyl, aryl, (substituted) silyl, or H; Q = active H-free and heterocyclic atom-containing C1-12 alkylene or arylene; Y1 = (substituted) silyl or H with part of R2, Q, and Y capable to form ring; Poly = the CD homopolymer or CD-AV copolymer component; Z1 = alkali or alkaline earth metal or residue from reaction with reactive carbanion compound or H]. Polymerizing butadiene and styrene in cyclohexane solution in the presence of an initiator from dimethyl-1,6-hexanediamine, BuLi, and Me3SiCl at 50° for 2.5 h and adding BHT gave a polymer showing number-average mol. weight 1.74 + 105, polydispersity 1.20, and 100° Mooney viscosity 22, 80 parts of which was kneaded with natural rubber 20, carbon black 50, and S 1.5 parts and vulcanized at 160° for 15 min to form a vulcanizate with tanδ index 69 under 15 Hz, 50° and 3% strain; vs.,

87, for a vulcanize prepared similarly from a SBR prepared in presence of hexamethylene diamine, ditetrahydrofurylpropane, and BuLi.

IC ICM C08F036-04  
 ICS C08F004-06; C08F008-00; C08L015-00

CC 39-4 (Synthetic Elastomers and Natural Rubber)

ST org alkali metal diamine silane reaction product polymn initiator; alk earth compd diamine silane reaction product polymn initiator; conjugated diene polymn initiator silyldiamine reaction product butyl lithium; low heat buildup conjugated diene rubber polymn initiator

IT Organometallic compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (alkali metal compds., polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic  
 alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

IT Amines, reactions  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (diamines, polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

IT Polymerization catalysts  
 (manufacture of conjugated diene polymers in presence of diamine/silane/organic  
 alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

IT Alkali metal compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (organometallic compds., polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic  
 alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

IT Alkaline earth compounds  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (organometallic, polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

IT Silanes  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

IT 75-77-4, Trimethylsilyl chloride, reactions 109-72-8, Butyllithium, reactions 13093-04-4, N,N'-Dimethyl-1,6-diaminohexane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (polymerization initiator from; manufacture of conjugated diene polymers in presence of diamine/silane/organic alkali or alkaline metal reaction products for vulcanizes with low heat buildup)

REFERENCE COUNT: 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 2 OF 7 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 2007:1302916 HCPLUS Full-text  
 DOCUMENT NUMBER: 147:522738  
 TITLE: Preparation of rare earth metallocene complex for diene and olefin polymerization catalyst

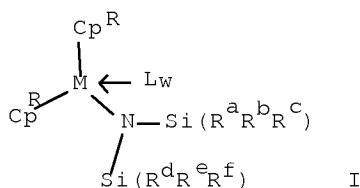
INVENTOR(S): Kaita, Shojiro; Tardif, Olivier  
 PATENT ASSIGNEE(S): Riken Corp., Japan; Bridgestone Corporation;  
 JSR Corporation  
 SOURCE: PCT Int. Appl., 53pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2007129670	A1	20071115	WO 2007-JP59389	20070502
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, MT, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
PRIORITY APPLN. INFO.:			JP 2006-130550	A 20060509

OTHER SOURCE(S): MARPAT 147:522738

ED Entered STN: 15 Nov 2007

GI



- AB The metallocene is represented by a structure I, wherein M=lanthanoid, scandium, or yttrium; CpR = unsubstituted or substituted indenyl; Ra-Rf = H, or C1-3 alkyl group; L = neutral Lewis base; and w = 0-3 integer. Thus, 0.791 g GdCl<sub>3</sub> in THF was added dropwise with 0.757 g indenyl lithium in THF, heated at 65° for 14 h, added dropwise with 0.519 g KN(SiMe<sub>3</sub>)<sub>2</sub> in toluene, stirred at room temperature for 16 h to give 0.519 g (C<sub>9</sub>H<sub>7</sub>)<sub>2</sub>GdN(SiMe<sub>3</sub>)<sub>2</sub>, 0.03 mmol of which was combined with 0.15 mmol triisobutyl aluminum and 0.03 mmol N,N-Dimethylanilinium tetrakis(pentafluorophenyl)borate to polymerize 1,3-butadiene in toluene at 20° for 15 min to give polybutadiene (93% yield) having cis- content 98.9%, Mn=120,000, and Mw/Mn=1.26.
- CC 35-3 (Chemistry of Synthetic High Polymers)  
 Section cross-reference(s): 29, 67
- ST rare earth metallocene diene olefin polymer catalyst
- IT Aluminoxanes
- RL: CAT (Catalyst use); USES (Uses)

(Me; preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT Polymerization catalysts  
 (metallocene; preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT Rare earth complexes  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT 100-99-2, Triisobutyl aluminum, uses  
 RL: CAT (Catalyst use); USES (Uses)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT 4505-48-0P, 2-Phenyl indene 956597-37-8P 956597-38-9P 956597-48-1P  
 956597-60-7P 956597-65-2P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT 956597-40-3P 956597-41-4P  
 RL: CAT (Catalyst use); IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT 118612-00-3, N,N-Dimethylanilinium tetrakis(pentafluorophenyl)borate  
 136040-19-2, Triphenylcarbonium tetrakis(pentafluorophenyl) borate  
 RL: CAT (Catalyst use); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT 9002-88-4P, Polyethylene 9003-17-2P, 1,3-Butadiene polymer  
9003-55-8P, 1,3-Butadiene-styrene  
copolymer 28325-75-9P 956597-39-0P 956597-42-5P  
 956597-43-6P 956597-44-7P 956597-45-8P 956597-46-9P 956597-47-0P  
 956597-49-2P 956597-51-6P 956597-53-8P 956597-56-1P 956597-64-1P  
 956597-66-3P  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

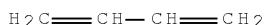
IT 956597-58-3P  
 RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

IT 2177-47-1, 2-Methyl indene 3661-63-0, 1-Methyl-2-phenyl indene  
 10138-52-0, Gadolinium chloride 15933-59-2, Tetramethyldisilazane  
 20669-47-0, Indenyl lithium 40949-94-8 53860-54-1 65090-77-9, Sodium isopropylcyclopentadienide 152153-72-5,  
 Tris(trimethylsilyl)silylpotassium 928851-93-8 956597-62-9  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

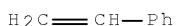
IT 9003-55-8P, 1,3-Butadiene-styrene  
copolymer  
 RL: IMF (Industrial manufacture); PREP (Preparation)  
 (preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6

CM 2

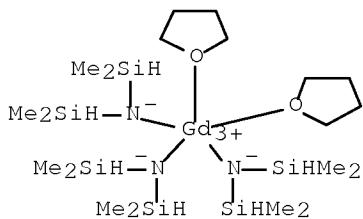
CRN 100-42-5  
CMF C8 H8IT 956597-58-3P

RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)

(preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

RN 956597-58-3 HCPLUS

CN Gadolinium, tris[N-(dimethylsilyl)-1,1-dimethylsilanaminato]bis(tetrahydrofuran)-, (TB-5-11)- (CA INDEX NAME)

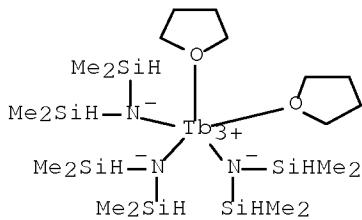
IT 956597-62-9

RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of rare earth metallocene complex for diene and olefin polymerization catalyst)

RN 956597-62-9 HCPLUS

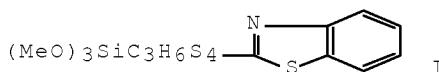
CN Terbium, tris[N-(dimethylsilyl)-1,1-dimethylsilanaminato]bis(tetrahydrofuran)- (CA INDEX NAME)



REFERENCE COUNT: 2 THERE ARE 2 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L82 ANSWER 3 OF 7 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1993:519294 HCPLUS [Full-text](#)  
 DOCUMENT NUMBER: 119:119294  
 ORIGINAL REFERENCE NO.: 119:21453a,21456a  
 TITLE: Rubber compositions  
 INVENTOR(S): Sato, Kazuhide; Oohashi, Masayuki  
 PATENT ASSIGNEE(S): ~~Bridgestone~~ Corp, Japan  
 SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

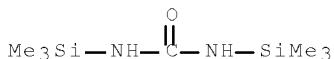
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05051484	A	19930302	JP 1991-236832	19910826
JP 3103153	B2	20001023		
PRIORITY APPLN. INFO.:			JP 1991-236832	19910826
OTHER SOURCE(S):	MARPAT	119:119294		
ED Entered STN:	18 Sep 1993			
GI				



AB Title compns., abrasion-resistant with low heat generation and useful for tires, hoses, and belts, comprise natural rubber and/or diene rubber 100, carbon black 10-60, and silica 5-50 parts and 1-15% (based on silica) silane coupling agents and 2-45% (based on silica) silylating agents selected from Me3SiNHSiMe3, MeC(OSiMe3):NSiMe3, (Me3SiNH)2CO, and tert-BuSiMe2Cl. Alternatively, the compns. comprise 25-35 parts silica and silane coupling agents selected from [(RO)3SiCnH2n]2Sm, (RO)3SiCnH2nX (R = Me, Et; X = SH, NH2; m = 1-6; n = 1-8), (MeO)3SiC3H6S4C(:S)NMe2, and I. Thus, a composition of JSR 1500 65, natural rubber 35, HAF carbon black 15, Nipsil AQ 30, Si 69 3, Me3SiNHSiMe3 9, ZnO 3, aromatic oil 5, N-phenyl-N'-isopropyl-p-phenylenediamine 1, N-oxydiethylene-2-benzothiazolylsulfenamide 1.5, and S 1.5 parts showed abrasion resistance index [= (abrasion loss of

reference)/(abrasion loss of specimen) + 100] 101 by Lambourn abrasion tester and tan δ (as measure of heat generation) 85 vs. 100 and 100 for a reference containing 45 parts carbon black in place of the silica and free of Si 69 and Me<sub>3</sub>SiNHSiMe<sub>3</sub>.

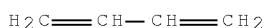
IC ICM C08L007-00  
 ICS C08K003-04; C08K003-36; C08K005-54; C08L009-00  
 CC 39-13 (Synthetic Elastomers and Natural Rubber)  
 IT Rubber, butadiene-styrene, uses  
 RL: USES (Uses)  
 (blends with natural rubber, containing carbon black and silica and silane coupling agents and silylating agents, abrasion-resistant, with low heat generation)  
 IT 999-97-3 4420-74-0 7631-86-9, Silica, uses 10416-59-8 18162-48-6  
18297-63-7 40372-72-3, Si 69 113946-60-4 119388-54-4  
 RL: USES (Uses)  
 (natural rubber-SBR blends containing, abrasion-resistant, with low heat generation, for tires)  
 IT 9003-55-8  
 RL: USES (Uses)  
 (rubber, blends with natural rubber, containing carbon black and silica and silane coupling agents and silylating agents, abrasion-resistant, with low heat generation)  
 IT 18297-63-7  
 RL: USES (Uses)  
 (natural rubber-SBR blends containing, abrasion-resistant, with low heat generation, for tires)  
 RN 18297-63-7 HCPLUS  
 CN Urea, N,N'-bis(trimethylsilyl)- (CA INDEX NAME)



IT 9003-55-8  
 RL: USES (Uses)  
 (rubber, blends with natural rubber, containing carbon black and silica and silane coupling agents and silylating agents, abrasion-resistant, with low heat generation)  
 RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

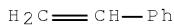
CRN 106-99-0  
 CMF C4 H6



CM 2

CRN 100-42-5

CMF C8 H8



L82 ANSWER 4 OF 7 HCPLUS COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 1988:168981 HCPLUS Full-text  
 DOCUMENT NUMBER: 108:168981  
 ORIGINAL REFERENCE NO.: 108:27783a, 27786a  
 TITLE: Rubber compositions containing imidazol(in)es and Broensted acids  
 INVENTOR(S): Hirata, Yasushi; Hatakeyama, Kazuya; Kondo, Hitoshi  
 PATENT ASSIGNEE(S): ~~Bridgestone~~ Corp., Japan  
 SOURCE: Eur. Pat. Appl., 21 pp.  
 CODEN: EPXXDW  
 DOCUMENT TYPE: Patent  
 LANGUAGE: English  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 251760	A2	19880107	EP 1987-305773	19870630
EP 251760	A3	19880601		
EP 251760	B1	19940126		
R: DE, FR, GB				
JP 63010645	A	19880118	JP 1986-152613	19860701
JP 07086155	B	19950920		
JP 63068647	A	19880328	JP 1986-210777	19860909
JP 63139931	A	19880611	JP 1986-286771	19861203
JP 07064955	B	19950712		
US 5140055	A	19920818	US 1991-727395	19910705
PRIORITY APPLN. INFO.:			JP 1986-152613	A 19860701
			JP 1986-210777	A 19860909
			JP 1986-286771	A 19861203
			JP 1986-39088	A1 19860226
			US 1987-66439	B1 19870626
			US 1988-229775	B1 19880805

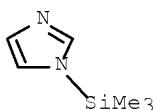
OTHER SOURCE(S): MARPAT 108:168981

ED Entered STN: 13 May 1988

AB A rubber composition, useful for vibration dampers and tire treads, having high mech. tan  $\delta$  at high temperature, comprises natural and/or synthetic rubber and 0.1-50 phr of a (benz)imidazol(in)e derivative. The use of 0.1-50 phr Broensted acid in addition improves the poor scorch resistance of the rubber composition containing these compds. alone, and enhances the grip of the tire tread at high speeds. SBR 100, aromatic oil 37.5, ISAF carbon black 65, and ZnO 3 parts were compounded with 0.01 mol 2-phenyl-4-methylimidazole (I) and appropriate amts. of 1,3-diphenylguanidine, 2-mercaptopbenzothiazole, and S and vulcanized to give a vulcanizate showing tan  $\delta$  at 80° under 1% dynamic strain 0.238, compared with 0.173 for a similar vulcanizate without I. Addition of 0.01 mol p-toluenesulfonic acid (II) to a similar rubber composition containing 0.01 mol 1-stearyl-2-undecylimidazole gave a composition showing Mooney scorch time at 130° (JIS K 6300) 15.1 min, compared with 6.6 min for a similar composition without II.

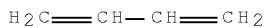
IC ICM C08K005-34

ICS B60C001-00; C08L021-00  
 CC 39-9 (Synthetic Elastomers and Natural Rubber)  
 IT Rubber, butadiene-styrene, uses and miscellaneous  
 RL: USES (Uses)  
 (compounding of, with (benz)imidazole derivs., for improved mech. loss at elevated temperature)  
 IT 51-17-2, Benzimidazole 60-56-0 94-52-0 104-98-3 443-48-1  
 570-22-9 582-60-5 615-15-6 670-96-2 693-98-1 716-79-0 822-36-6  
 827-43-0 931-36-2 936-49-2 1137-68-4 2034-22-2 2232-08-8  
 2466-76-4 3584-66-5 4414-88-4 4857-04-9 5418-95-1 5805-76-5  
 10041-02-8 13682-32-1 13750-62-4 16731-68-3 18156-74-6  
 21054-72-8 23328-87-2 23996-12-5 23996-16-9 23996-55-6  
 24370-25-0 31430-18-9 38668-46-1 49556-76-5 50729-75-4  
 50729-78-7 61698-32-6 63592-54-1 68083-35-2 85598-94-3  
 113946-81-9 114136-96-8 114136-97-9 114136-98-0 114137-01-8  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (rubber compns. containing, for improved mech. loss at elevated temperature)  
 IT 9003-55-8  
 RL: USES (Uses)  
 (rubber, compounding of, with (benz)imidazole derivs., for improved mech. loss at elevated temperature)  
 IT 18156-74-6  
 RL: MOA (Modifier or additive use); USES (Uses)  
 (rubber compns. containing, for improved mech. loss at elevated temperature)  
 RN 18156-74-6 HCPLUS  
 CN 1H-Imidazole, 1-(trimethylsilyl)- (CA INDEX NAME)



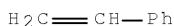
IT 9003-55-8  
 RL: USES (Uses)  
 (rubber, compounding of, with (benz)imidazole derivs., for improved mech. loss at elevated temperature)  
 RN 9003-55-8 HCPLUS  
 CN Benzene, ethenyl-, polymer with 1,3-butadiene (CA INDEX NAME)

CM 1

CRN 106-99-0  
CMF C4 H6

CM 2

CRN 100-42-5  
CMF C8 H8

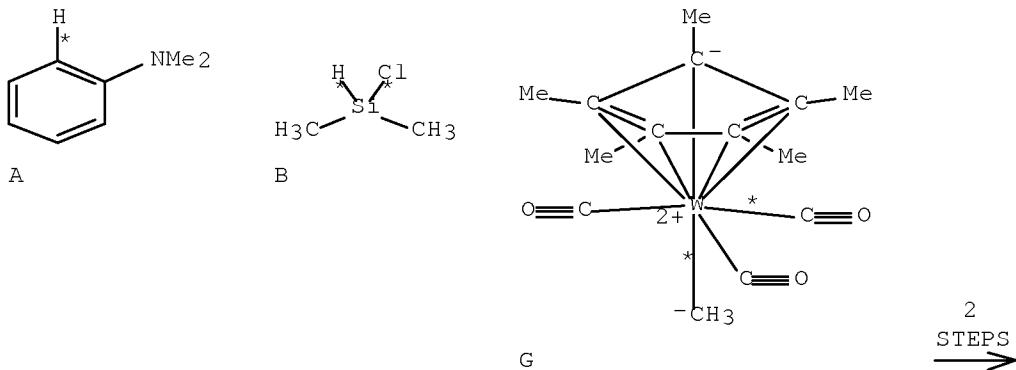
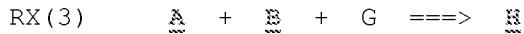


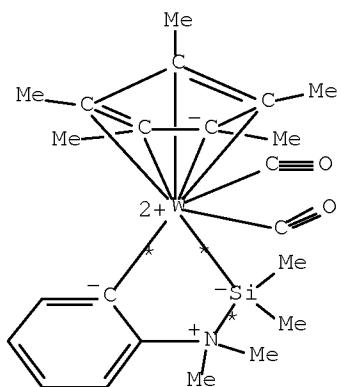
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YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX' - CONTINUE? (Y)/N:y

L82 ANSWER 5 OF 7 CASREACT COPYRIGHT 2008 ACS on STN  
 ACCESSION NUMBER: 139:396027 CASREACT Full-text  
 TITLE: Facile Isomerization of a Tungsten Silyl Complex to a Base-Stabilized Silylene Complex via 1,2-Migration of an Aryl Group  
 AUTHOR(S): Okazaki, Masaaki; Suzuki, Eiji; Miyajima, Norito; Tobita, Hiromi; Ogino, Hiroshi  
 CORPORATE SOURCE: Department of Chemistry, Graduate School of Science, Tohoku University, Sendai, 980-8578, Japan  
 SOURCE: Organometallics (2003), 22(23), 4633-4635  
 CODEN: ORGND7; ISSN: 0276-7333  
 PUBLISHER: American Chemical Society  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 AB Irradiation of  $\text{Cp}^*(\text{CO})_3\text{WMe}$  in the presence of N,N-dimethyl-2-(dimethylsilyl)aniline led to the intermediate formation of  $\text{Cp}^*(\text{CO})_2\text{W}\{\kappa^2(\text{Si},\text{N})-\text{Me}_2\text{N}(\text{o-C}_6\text{H}_4\text{SiMe}_2)\}$  (3), which was converted to the base-stabilized silylene complex  $\text{Cp}^*(\text{CO})_2\text{W}\{\kappa^2(\text{Si},\text{C})-\text{SiMe}_2\text{NMe}_2(\text{o-C}_6\text{H}_4)\}$  (2) through 1,2-migration of the aryl group.  
 REFERENCE COUNT: 27 THERE ARE 27 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(3) OF 3 COMPOSED OF RX(1), RX(2)





H  
YIELD 76%

RX(1) RCT A 121-69-7

STAGE(1)

RGT D 109-72-8 BuLi  
 SOL 110-54-3 Hexane  
 CON SUBSTAGE(1) room temperature  
 SUBSTAGE(2) 20 hours, 90 deg C  
 SUBSTAGE(3) 90 deg C -> room temperature

STAGE(2)

RCT B 1066-35-9  
 SOL 110-54-3 Hexane  
 CON SUBSTAGE(1) 0 deg C  
 SUBSTAGE(2) 1 hour, room temperature

STAGE(3)

RGT E 7732-18-5 Water

PRO C 626255-16-1

RX(2) RCT C 626255-16-1, G 34807-90-4

PRO H 626255-17-2

SOL 108-88-3 PhMe

CON SUBSTAGE(1) 70 minutes, 5 deg C  
 SUBSTAGE(2) 3 hours, room temperature

NTE photochem.

AU Okazaki, Masaaki; Suzuki, Eiji; Miyajima, Norito; Tobita, Hiromi; Ogino, Hiroshi

L82 ANSWER 6 OF 7 CASREACT COPYRIGHT 2008 ACS on STN

ACCESSION NUMBER: 127:81311 CASREACT Full-text

TITLE: Asymmetric synthesis of (R)-nilvadipine and (S)-NB 818 via regioselective bromination of chiral 1,4-dihydropyridines as a key step and enzymic resolution of racemic

AUTHOR(S):

Ebiike, Hirosato; Maruyama, Kaori; Ozawa, Yumi  
 ; Yamazaki, Yukiyoshi; Achiwa, Kazuo

CORPORATE SOURCE:

School of Pharmaceutical Sciences, University of  
 Shizuoka, Shizuoka, 422, Japan

SOURCE:

Chemical & Pharmaceutical Bulletin (1997), 45(5),  
 869-876

PUBLISHER:

Pharmaceutical Society of Japan

DOCUMENT TYPE:

Journal

LANGUAGE:

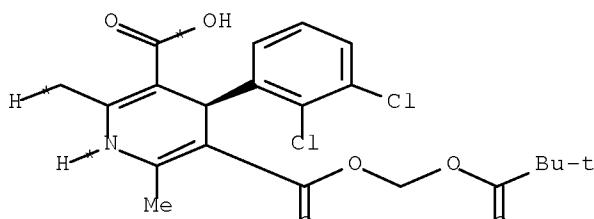
English

AB      Optically active 2-hydroxymethyl-1,4-dihydropyridines, e.g., I, were obtained by lipase-catalyzed hydrolysis or transesterification of racemic materials. Chiral NB 818 and nilvadipine have been synthesized from chiral 2-hydroxymethyl-1,4-dihydropyridine. On the other hand, chiral 1,4-dihydropyridines obtained from prochiral substrates have been converted into (S)-NB 818 and (R)-nilvadipine via regioselective bromination of Me groups under mild conditions.

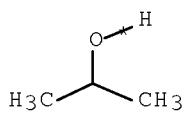
REFERENCE COUNT:      20      THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

RX(54) OF 64 COMPOSED OF RX(15), RX(16), RX(17), RX(18)

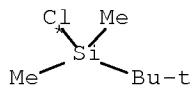
RX(54)    AP + B + 2 AX ==&gt; AY



AP

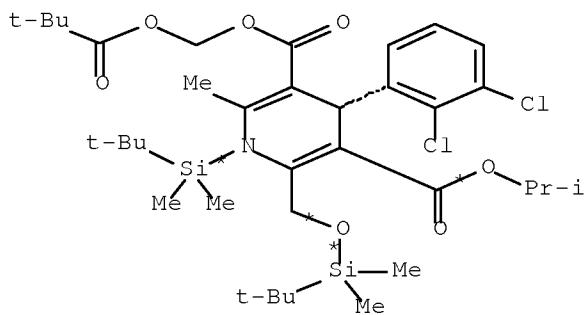


B



2 AX

4  
STEPS  
→

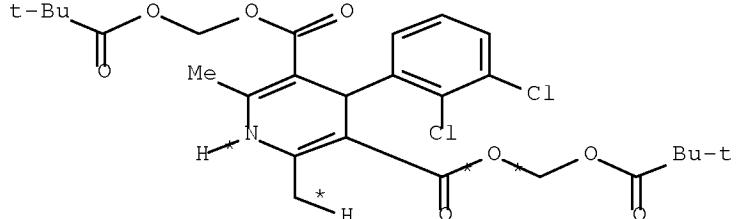


AY  
YIELD 95%

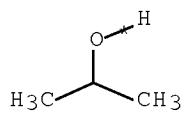
- RX(15) RCT AP 164263-08-5, B 67-63-0  
 RGT AS 1122-58-3 4-DMAP, AT 598-30-1 s-BuLi  
 PRO AR 174840-07-4  
 SOL 67-63-0 Me<sub>2</sub>CHOH
- RX(16) RCT AR 174840-07-4  
 RGT AG 39416-48-3 Pyridinium tribromide  
 PRO AU 174840-08-5  
 SOL 75-09-2 CH<sub>2</sub>Cl<sub>2</sub>
- RX(17) RCT AU 174840-08-5  
 RGT AW 7761-88-8 AgNO<sub>3</sub>  
 PRO AV 174840-09-6  
 SOL 67-64-1 Me<sub>2</sub>CO, 7732-18-5 Water
- RX(18) RCT AV 174840-09-6, AX 18162-48-6  
 RGT AZ 288-32-4 1H-Imidazole  
 PRO AY 174840-10-9  
 SOL 68-12-2 DMF

RX(64) OF 64 COMPOSED OF RX(14), RX(15), RX(16), RX(17), RX(18)

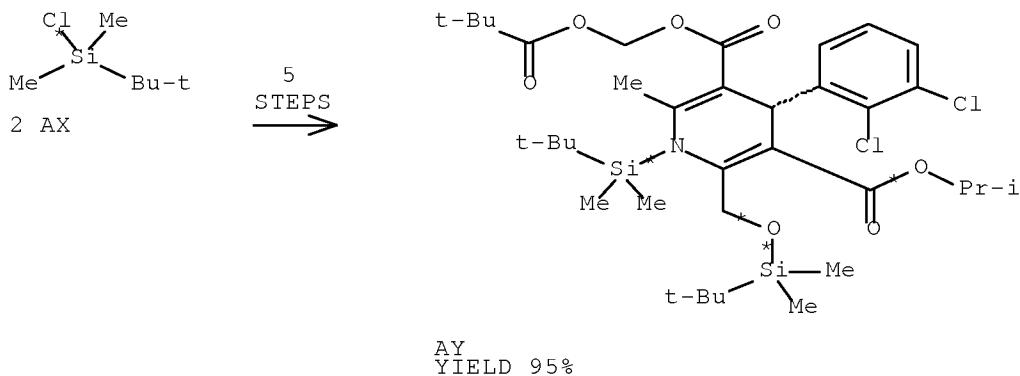
RX(64) AO + B + 2 AX ==> AY



AO



B



RX(14)	RCT	AO <u>164263-05-2</u>
	RGT	AB 9001-62-1 Lipase
	PRO	AP 164263-08-5
	SOL	7732-18-5 Water, 110-82-7 Cyclohexane
	NTE	biotransformation, enzymic
RX(15)	RCT	AP 164263-08-5, B 67-63-0
	RGT	AS 1122-58-3 4-DMAP, AT 598-30-1 s-BuLi
	PRO	AR 174840-07-4
	SOL	67-63-0 Me2CHOH
RX(16)	RCT	AR 174840-07-4
	RGT	AG 39416-48-3 Pyridinium tribromide
	PRO	AU 174840-08-5
	SOL	75-09-2 CH2Cl2
RX(17)	RCT	AU 174840-08-5
	RGT	AW 7761-88-8 AgNO3
	PRO	AV 174840-09-6
	SOL	67-64-1 Me2CO, 7732-18-5 Water
RX(18)	RCT	AV 174840-09-6, AX <u>18162-48-6</u>
	RGT	AZ 288-32-4 1H-Imidazole
	PRO	AY <u>174840-10-9</u>
	SOL	68-12-2 DMF
AU	Ebiike, Hirosato; Maruyama, Kaori; Ozawa, Yumi; Yamazaki, Yukiyoshi; Achiwa, Kazuo	

=> d iall abeq tech abex 7  
YOU HAVE REQUESTED DATA FROM FILE 'HCAPLUS, CASREACT, WPIX' - CONTINUE? (Y)/N:y

L82 ANSWER 7 OF 7 WPIX COPYRIGHT 2008 THOMSON REUTERS on STN  
ACCESSION NUMBER: 2001-482882 [52] WPIX  
DOC. NO. CPI: C2001-144630 [52]  
TITLE: Preparation of a functionalized polymer useful in the manufacture of tire components involves preparing a pseudo-living polymer by polymerizing conjugated diene monomer

DERWENT CLASS: A12; A95; E19; Q11  
 INVENTOR: MASAKI K; MILLER H; MILLER H J; MILLER J; OZAWA Y  
 PATENT ASSIGNEE: (BRID-C) BRIDGESTONE CORP; (MASA-I) MASAKI K;  
 (MILL-I) MILLER H J; (OZAW-I) OZAWA Y  
 COUNTRY COUNT: 22

## PATENT INFORMATION:

PATENT NO	KIND	DATE	WEEK	LA	PG	MAIN IPC
WO 2001034659	A1	20010517	(200152)*	EN	32[0]	
EP 1237935	A1	20020911	(200267)	EN		
JP 2003514079	W	20030415	(200328)	JA	41	
US 6977281	B1	20051220	(200601)	EN		
US 20060025539	A1	20060202	(200610)	EN		
EP 1237935	B1	20070124	(200710)	EN		
DE 60033179	E	20070315	(200726)	DE		
ES 2281362	T3	20071001	(200768)	ES		
DE 60033179	T2	20071115	(200777)	DE		

## APPLICATION DETAILS:

PATENT NO	KIND	APPLICATION	DATE
WO 2001034659	A1	WO 2000-US30875	20001110
US 6977281	B1 Provisional	US 1999-165169P	19991112
US 20060025539	A1 Provisional	US 1999-165169P	19991112
DE 60033179	E	DE 2000-633179	20001110
EP 1237935	A1	EP 2000-977129	20001110
EP 1237935	B1	EP 2000-977129	20001110
DE 60033179	E	EP 2000-977129	20001110
ES 2281362	T3	EP 2000-977129	20001110
EP 1237935	A1	WO 2000-US30875	20001110
JP 2003514079	W	WO 2000-US30875	20001110
US 6977281	B1	WO 2000-US30875	20001110
US 20060025539	A1 Cont of	WO 2000-US30875	20001110
EP 1237935	B1	WO 2000-US30875	20001110
DE 60033179	E	WO 2000-US30875	20001110
JP 2003514079	W	JP 2001-537370	20001110
US 6977281	B1	US 2003-296082	20030813
US 20060025539	A1 Cont of	US 2003-296082	20030813
US 20060025539	A1	US 2005-243874	20051005
DE 60033179	T2	DE 2000-633179	20001110
DE 60033179	T2	EP 2000-977129	20001110
DE 60033179	T2	WO 2000-US30875	20001110

## FILING DETAILS:

PATENT NO	KIND	PATENT NO
DE 60033179	E	Based on EP 1237935 A
ES 2281362	T3	Based on EP 1237935 A
US 20060025539	A1	Cont of US 6977281 B
EP 1237935	A1	Based on WO 2001034659 A
JP 2003514079	W	Based on WO 2001034659 A
US 6977281	B1	Based on WO 2001034659 A
EP 1237935	B1	Based on WO 2001034659 A
DE 60033179	E	Based on WO 2001034659 A
DE 60033179	T2	Based on EP 1237935 A
DE 60033179	T2	Based on WO 2001034659 A

PRIORITY APPLN. INFO: US 1999-165169P 19991112  
 WO 2000-US30875 20001110  
 US 2003-296082 20030813  
 US 2005-243874 20051005

## INT. PATENT CLASSIF.:

MAIN: C08C019-22; C08F008-30  
 IPC ORIGINAL: C08C0019-00 [I,C]; C08C0019-00 [I,C]; C08C0019-22 [I,A];  
 C08C0019-44 [I,A]; C08C0019-44 [I,A]; C08F0136-00 [I,C];  
 C08F0136-00 [I,C]; C08F0136-04 [I,A]; C08F0136-04 [I,A];  
 C08F0008-00 [I,C]; C08F0008-30 [I,A]; C08L0019-00 [I,A];  
 C08L0019-00 [I,A]; C08L0019-00 [I,C]; C08L0019-00 [I,C]  
 IPC RECLASSIF.: B60C0001-00 [I,A]; B60C0001-00 [I,C]; C08C0019-00 [I,C];  
 C08C0019-44 [I,A]; C08F0136-00 [I,C]; C08F0136-04 [I,A];  
 C08F0036-00 [I,C]; C08F0036-04 [I,A];  
 C08F0004-00 [I,C]; C08F0004-54 [I,A]; C08F0004-60 [I,A];  
 C08F0008-00 [I,C]; C08F0008-30 [I,A]; C08K0003-00 [I,C];  
 C08K0003-36 [I,A]; C08L0015-00 [I,A]; C08L0015-00 [I,C];  
 C08L0019-00 [I,A]; C08L0019-00 [I,C]  
 ECLA: C08C0019-44; C08F0136-04+4/54D; C08L0019-00D  
 USCLASS NCLM: 525/377.000  
 NCLS: 525/105.000; 525/342.000; 525/383.000

## BASIC ABSTRACT:

WO 2001034659 A1 UPAB: 20071024

NOVELTY - A method for preparing a functionalized polymer involves:

(a) preparing a pseudo-living polymer by polymerizing conjugated diene monomer with a lanthanide-based catalyst; and

(b) reacting the pseudo-living polymer with at least one functionalizing agent.

DETAILED DESCRIPTION - A method for preparing a functionalized polymer involves:

(a) preparing a pseudo-living polymer by polymerizing conjugated diene monomer with a lanthanide-based catalyst; and

(b) reacting the pseudo-living polymer with at least one functionalizing agent of formula (I) or (II).

Z = a substituent that will react or interact with organic or inorganic fillers;

R1 = a single bond or a divalent organic group;

R2 = a monovalent organic group or a divalent organic group that forms a cyclic organic group with R3 or R4;

R3 = a single bond, a divalent organic group, or a trivalent organic group that forms a cyclic organic group with R2, R4 or R5;

R4 = a monovalent organic group or a divalent organic group that forms a cyclic organic group with R2, R3 or R5; and

R5 = a monovalent organic group or a divalent organic group that forms a cyclic organic group with R2, R3 or R4

with the proviso that each group attached to the imino carbon is attached via a carbon atom and R1, R2, R3, R4, R5 and Z are substituents that will not protonate a pseudo-living polymer

An INDEPENDENT CLAIM is also included for a rubber component comprising:

- (a) functionalized polymer; and
- (b) a reinforcing filler.

USE - The functionalized polymers are useful in the manufacture of tire components, including tire treads (claimed), side walls, sub treads, and bead fillers.

ADVANTAGE - The functionalized polymers have improved cold flow resistance.

MANUAL CODE: CPI: A02-A06; A04-B01A; A04-B01D; A10-E; A12-T01; E05-E; E05-P; E07-D03; E07-D09C; E07-D11; E10-A20B; E31-P03;

TECH

POLYMERS - Preferred Polymer: The pseudo-living polymer includes more than 85 wt.% polymeric units in the cis-microstructure and less than 3 wt.% polymeric units in the 1,2- or 3,4-microstructure. The polymer has a molecular weight distribution of less than 4 and is preferably poly(butadiene).

ORGANIC CHEMISTRY - Preferred Functionalizing Agent: Z is a silane group, an N,N-disubstituted aminophenyl group an imine group or a cyclic amino group. The functionalizing agent is present in amount 0.01-200 moles per mole of lanthanide-based catalyst.

INORGANIC CHEMISTRY - Preferred Filler: The inorganic filler comprises silica.

ABEX SPECIFIC COMPOUNDS - The functionalizing agent comprises N-(3-triethoxysilylpropyl)-4,5-dihydroimidazole, N-(1,3-dimethylbutylidene)-3-triethoxysilyl)-1-propanamine, oligomers or mixtures thereof, dimethylaminobenzylidene ethylamine, diethylaminobenzylidene butylamine, dimethylaminobenzylidene aniline, dimethylaminobenzylidene n-butylaniline, dimethylaminobenzylidene dodecylaniline, dimethylaminobenzylidene methoxyaniline, dimethylaminobenzylidene dimethylaminoaniline; bis(dimethyl aminophenyl) methylidene butylamine, bis(dimethylaminophenyl) methylidene n-octylamine, bis(diethylaminophenyl) methylidene butylamine, bis(diethylaminophenyl)methylidene n-octylamine, benzylidene dimethylaminoaniline, methoxybenzylidene dimethylaminoaniline, 1-methyl-4-pentene-2-yl-methylidene dimethylaniline, 1,3-dimethylbutylidene dimethylaniline, phenylene bis(dimethylaminobenzylidene amine), benzylidene (1-hexamethyleneimino)aniline, benzylidene (1-pyrrolidino)aniline, dimethylaminobenzylidene (1-hexamethyleneimino) aniline, dimethylaminobenzylidene (1-pyrrolidino)aniline, (1-hexamethyleneimino)benzylidene aniline, (1-pyrrolidino)benzylidene aniline, benzylidene ((4-n-butyl-1-piperazino)methyl)aniline, benzylidene ((3-(1-methyl)pyrrolidino)methyl)aniline, ((4-n-butyl-1-piperazino)methyl)benzylidene aniline or ((3-(1-methyl)pyrrolidino)methyl)benzylidene aniline.

=> file stnguide

FILE 'STNGUIDE' ENTERED AT 15:08:27 ON 24 OCT 2008

USE IS SUBJECT TO THE TERMS OF YOUR CUSTOMER AGREEMENT

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FILE CONTAINS CURRENT INFORMATION.

LAST RELOADED: Oct 17, 2008 (20081017/UP).

=> d his ful

(FILE 'HOME' ENTERED AT 12:07:30 ON 24 OCT 2008)

FILE 'STNGUIDE' ENTERED AT 12:07:33 ON 24 OCT 2008

FILE 'ZCAPLUS' ENTERED AT 12:07:42 ON 24 OCT 2008  
E US2007-599651/APPS

FILE 'HCAPLUS' ENTERED AT 12:07:59 ON 24 OCT 2008  
L1 1 SEA ABB=ON PLU=ON US2007-599651/APPS  
D SCAN

FILE 'STNGUIDE' ENTERED AT 12:08:08 ON 24 OCT 2008

FILE 'WPIX' ENTERED AT 12:08:17 ON 24 OCT 2008  
L2 1 SEA ABB=ON PLU=ON US2007-599651/APPS

FILE 'STNGUIDE' ENTERED AT 12:08:25 ON 24 OCT 2008  
D QUE STAT L1

FILE 'HCAPLUS' ENTERED AT 12:08:56 ON 24 OCT 2008  
D IBIB ED ABS IND L1

FILE 'STNGUIDE' ENTERED AT 12:08:56 ON 24 OCT 2008  
D QUE L2

FILE 'WPIX' ENTERED AT 12:09:33 ON 24 OCT 2008  
D IALL CODE L2

FILE 'STNGUIDE' ENTERED AT 12:09:37 ON 24 OCT 2008

FILE 'REGISTRY' ENTERED AT 12:10:28 ON 24 OCT 2008

FILE 'HCAPLUS' ENTERED AT 12:10:32 ON 24 OCT 2008  
L3 TRA PLU=ON L1 1- RN : 31 TERMS

FILE 'REGISTRY' ENTERED AT 12:10:35 ON 24 OCT 2008  
L4 31 SEA ABB=ON PLU=ON L3  
D SCAN

FILE 'STNGUIDE' ENTERED AT 12:11:01 ON 24 OCT 2008

FILE 'REGISTRY' ENTERED AT 12:18:23 ON 24 OCT 2008

FILE 'LREGISTRY' ENTERED AT 12:18:25 ON 24 OCT 2008  
L5 STR

FILE 'REGISTRY' ENTERED AT 12:18:44 ON 24 OCT 2008  
L6 50 SEA SSS SAM L5  
D QUE STAT

FILE 'LREGISTRY' ENTERED AT 12:20:53 ON 24 OCT 2008  
L7 STR L5

FILE 'REGISTRY' ENTERED AT 12:22:39 ON 24 OCT 2008  
L8 50 SEA SSS SAM L7  
D QUE STAT

L9 44315 SEA SSS FUL L7

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SAVE TEMP L9 HUH651PSET1/A

FILE 'STNGUIDE' ENTERED AT 12:25:23 ON 24 OCT 2008

FILE 'ZCPLUS' ENTERED AT 12:26:30 ON 24 OCT 2008  
L10           QUE ABB=ON PLU=ON SUZUKI, E?/AU  
L11           QUE ABB=ON PLU=ON OZAWA, Y?/AU  
L12           QUE ABB=ON PLU=ON (BRIDGESTONE OR (BRIDGE(1W)STONE))/CS, SO, P  
A  
L13           QUE ABB=ON PLU=ON ?POLYMERI? OR COPOLYMER?  
L14           QUE ABB=ON PLU=ON ?CATALY?  
L15           QUE ABB=ON PLU=ON INITIAT? OR START?  
L\*\*\* DEL     QUE "POLYMERIZATION CATALYSTS"+PFT, OLD, NEW/CT  
E POLYMERIZATION CATALYSTS/CT  
E E15+ALL  
L16           QUE ABB=ON PLU=ON "POLYMERIZATION CATALYSTS"+PFT, OLD, NEW, NT/C  
T

FILE 'HCPLUS' ENTERED AT 12:29:54 ON 24 OCT 2008

L17       19109 SEA ABB=ON PLU=ON L9  
L18       974 SEA ABB=ON PLU=ON L17 AND L16  
L19       630 SEA ABB=ON PLU=ON L17 (L)(L13(L)(L14 OR L15))  
L20       585 SEA ABB=ON PLU=ON L18 AND L19

FILE 'STNGUIDE' ENTERED AT 12:30:48 ON 24 OCT 2008

FILE 'ZCPLUS' ENTERED AT 12:31:33 ON 24 OCT 2008  
L21       QUE ABB=ON PLU=ON ?DIENE? ?DIENYL OR ?BUTADIEN?  
L22       QUE ABB=ON PLU=ON ?STYREN?

FILE 'REGISTRY' ENTERED AT 12:32:17 ON 24 OCT 2008

L23       1 SEA ABB=ON PLU=ON L4 AND PMS/CI  
D SCAN

FILE 'STNGUIDE' ENTERED AT 12:32:49 ON 24 OCT 2008  
D QUE

FILE 'REGISTRY' ENTERED AT 12:33:05 ON 24 OCT 2008  
D IDE L23

FILE 'STNGUIDE' ENTERED AT 12:33:05 ON 24 OCT 2008

FILE 'HCPLUS' ENTERED AT 12:33:18 ON 24 OCT 2008  
L24       48629 SEA ABB=ON PLU=ON L23  
L25       6 SEA ABB=ON PLU=ON L24 AND (L18 OR L19)  
L26       27 SEA ABB=ON PLU=ON L24 AND L17  
L27       27 SEA ABB=ON PLU=ON (L25 OR L26)  
L28       26 SEA ABB=ON PLU=ON L27 AND ((L13 OR L14 OR L15 OR L16) OR  
(L21 OR L22))  
L29       27 SEA ABB=ON PLU=ON (L27 OR L28)  
L30       3 SEA ABB=ON PLU=ON L29 AND (L10 OR L11 OR L12)  
L31       0 SEA ABB=ON PLU=ON L1 AND L30  
L32       4 SEA ABB=ON PLU=ON (L30 OR L31) OR L1  
L33       24 SEA ABB=ON PLU=ON L29 NOT L32

FILE 'REGISTRY' ENTERED AT 12:36:42 ON 24 OCT 2008

FILE 'HCPLUS' ENTERED AT 12:36:49 ON 24 OCT 2008  
L34       TRA PLU=ON L33 1- RN :     396 TERMS

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FILE 'REGISTRY' ENTERED AT 12:36:54 ON 24 OCT 2008  
L35        396 SEA ABB=ON PLU=ON L34  
L36        53 SEA ABB=ON PLU=ON L35 AND L9  
            D SCAN

FILE 'STNGUIDE' ENTERED AT 12:40:00 ON 24 OCT 2008

FILE 'ZCPLUS' ENTERED AT 12:43:52 ON 24 OCT 2008  
L37        QUE ABB=ON PLU=ON ?SILAN? OR ?SILYL?  
L38        QUE ABB=ON PLU=ON DIAMIN? OR (DI(1W)(AMINE OR AMINO))  
            E DIAMINES/CT  
            E E88+ALL  
L39        QUE ABB=ON PLU=ON AMINES+PFT,OLD,NEW/CT (L) L38

FILE 'HCPLUS' ENTERED AT 12:46:41 ON 24 OCT 2008

L40        71 SEA ABB=ON PLU=ON L39 (L)L37  
L41        5 SEA ABB=ON PLU=ON L40 AND (L16 OR (L13(5A)(L14 OR L15)))  
L42        1 SEA ABB=ON PLU=ON L41 AND (L10 OR L11 OR L12)  
L43        1 SEA ABB=ON PLU=ON L42 AND L1  
L\*\*\* DEL    131 S L43 OR O32  
L44        4 SEA ABB=ON PLU=ON L43 OR L32  
L45        4 SEA ABB=ON PLU=ON L41 NOT L44  
            D SCAN TI HIT  
L46        28 SEA ABB=ON PLU=ON L45 OR L33  
L47        28 SEA ABB=ON PLU=ON L46 NOT L44

FILE 'STNGUIDE' ENTERED AT 12:49:07 ON 24 OCT 2008

FILE 'LREGISTRY' ENTERED AT 12:49:39 ON 24 OCT 2008  
L48        STR

FILE 'CASREACT' ENTERED AT 12:54:01 ON 24 OCT 2008  
L49        50 SEA SSS SAM L48 ( 357 REACTIONS)  
            D QUE STAT

FILE 'STNGUIDE' ENTERED AT 12:56:42 ON 24 OCT 2008

FILE 'CASREACT' ENTERED AT 13:01:41 ON 24 OCT 2008  
L50        SCREEN 1967 OR 1936  
L51        50 SEA SSS SAM (L50 AND L48) ( 341 REACTIONS)

FILE 'STNGUIDE' ENTERED AT 13:03:02 ON 24 OCT 2008  
            D QUE STAT

FILE 'CASREACT' ENTERED AT 13:05:34 ON 24 OCT 2008  
L52        1306 SEA SSS FUL (L50 AND L48) ( 10185 REACTIONS)  
            SAVE TEMP L52 HUH651CRXP/A  
L53        58 SEA ABB=ON PLU=ON L52 AND L38  
            D QUE L13  
L54        4 SEA ABB=ON PLU=ON L53 AND (L13(5A)(L14 OR L15))  
            D SCAN  
L55        2 SEA ABB=ON PLU=ON L52 AND (L10 OR L11 OR L12)  
L56        4 SEA ABB=ON PLU=ON L54 NOT L55  
            SAVE TEMP L56 HUH651CRXB/A

FILE 'STNGUIDE' ENTERED AT 13:10:31 ON 24 OCT 2008  
            D SAVED

FILE 'STNGUIDE' ENTERED AT 13:31:58 ON 24 OCT 2008

10/599,651

FILE 'ZCAPLUS' ENTERED AT 13:32:03 ON 24 OCT 2008  
L57           QUE ABB=ON PLU=ON C08F0036-04/IPC  
L58           QUE ABB=ON PLU=ON C08F0004-08/IPC  
L59           QUE ABB=ON PLU=ON C08F0004-10/IPC

FILE 'WPIX' ENTERED AT 13:33:01 ON 24 OCT 2008  
L60           QUE ABB=ON PLU=ON (F09/PLE (S) SI/PLE) (P)C293/PLE  
L61           230 SEA ABB=ON PLU=ON (F09/PLE (S) SI/PLE) (P)C293/PLE  
              D KWIX  
L62           6 SEA ABB=ON PLU=ON L61 AND L57  
L63           2 SEA ABB=ON PLU=ON L61 AND (L58 OR L59)  
L64           6 SEA ABB=ON PLU=ON (L62 OR L63)  
L65           6 SEA ABB=ON PLU=ON L64 AND ((L13 OR L14 OR L15) OR (L21 OR  
              L22) OR (L37 OR L38))  
L66           6 SEA ABB=ON PLU=ON (L64 OR L65)  
L67           2 SEA ABB=ON PLU=ON L66 AND (L10 OR L11 OR L12)  
L68           1 SEA ABB=ON PLU=ON L2 AND L67  
L69           2 SEA ABB=ON PLU=ON (L67 OR L68)  
L70           4 SEA ABB=ON PLU=ON L66 NOT L69  
              D TRI 1-4  
              D KWIC 3-4

FILE 'STNGUIDE' ENTERED AT 13:37:44 ON 24 OCT 2008

FILE 'STNGUIDE' ENTERED AT 14:39:24 ON 24 OCT 2008

FILE 'EMA' ENTERED AT 14:44:19 ON 24 OCT 2008

FILE 'ANTE' ENTERED AT 14:44:37 ON 24 OCT 2008

FILE 'STNGUIDE' ENTERED AT 14:44:49 ON 24 OCT 2008

FILE 'ANTE, EMA, APOLLIT, RAPRA, INSPEC, COMPENDEX, MEDLINE, BIOSIS,  
EMBASE, PASCAL, SCISEARCH, CONFSCI, DISSABS, RDISCLOSURE' ENTERED AT  
14:45:25 ON 24 OCT 2008  
              D QUE L38  
L71           829 SEA ABB=ON PLU=ON L38(5A) L37  
              D KWIC  
L72           153786 SEA ABB=ON PLU=ON L13 (5A) (L14 OR L15)  
L73           2 SEA ABB=ON PLU=ON L71 (15A) L72  
              D SCAN  
              D TRI  
L74           0 SEA ABB=ON PLU=ON L73 AND (L10 OR L11 OR L12)  
L75           2 SEA ABB=ON PLU=ON L73 NOT L74

FILE 'STNGUIDE' ENTERED AT 14:51:27 ON 24 OCT 2008

FILE 'JAPIO' ENTERED AT 14:51:33 ON 24 OCT 2008  
L76           78 SEA ABB=ON PLU=ON L38(5A)L37  
L77           1 SEA ABB=ON PLU=ON L76 AND L57  
              D SCAN  
L78           31301 SEA ABB=ON PLU=ON L13 (5A)(L14 OR L15)  
L79           1 SEA ABB=ON PLU=ON L76 (20A)L78  
L80           2 SEA ABB=ON PLU=ON L77 OR L79  
              D BIB 1-2

FILE 'STNGUIDE' ENTERED AT 14:53:20 ON 24 OCT 2008  
              D QUE STAT L9  
              D QUE L23  
              D QUE NOS L47

D QUE STAT L52  
 D QUE NOS L56  
 D QUE L70  
 D QUE L75  
 D QUE L80

FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' ENTERED AT  
 14:56:16 ON 24 OCT 2008

L81        40 DUP REM L47 L56 L70 L75 L80 (0 DUPLICATES REMOVED)  
             ANSWERS '1-28' FROM FILE HCAPLUS  
             ANSWERS '29-32' FROM FILE CASREACT  
             ANSWERS '33-36' FROM FILE WPIX  
             ANSWER '37' FROM FILE RAPRA  
             ANSWER '38' FROM FILE COMPENDEX  
             ANSWERS '39-40' FROM FILE JAPIO  
             SAVE TEMP L81 HUH651MAIN/A

FILE 'STNGUIDE' ENTERED AT 14:56:35 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' ENTERED AT  
 14:57:05 ON 24 OCT 2008

D IBIB ED ABS HITIND HITSTR 1-10

FILE 'STNGUIDE' ENTERED AT 14:57:12 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' ENTERED AT  
 14:59:08 ON 24 OCT 2008

D IBIB ED ABS HITIND HITSTR 11-28

FILE 'STNGUIDE' ENTERED AT 14:59:21 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' ENTERED AT  
 15:01:37 ON 24 OCT 2008

D IBIB AB HIT 29-32

FILE 'STNGUIDE' ENTERED AT 15:02:10 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' ENTERED AT  
 15:03:28 ON 24 OCT 2008

D IALL ABEQ TECH ABEX 33-36

FILE 'STNGUIDE' ENTERED AT 15:03:35 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX, RAPRA, COMPENDEX, JAPIO' ENTERED AT  
 15:04:44 ON 24 OCT 2008

D BIB AB IND 37-40

FILE 'STNGUIDE' ENTERED AT 15:04:45 ON 24 OCT 2008

FILE 'STNGUIDE' ENTERED AT 15:05:35 ON 24 OCT 2008

D QUE NOS L44  
 D QUE NOS L55  
 D QUE L69  
 D QUE L74

FILE 'HCAPLUS, CASREACT, WPIX' ENTERED AT 15:06:17 ON 24 OCT 2008

L82        7 DUP REM L44 L55 L69 L74 (1 DUPLICATE REMOVED)  
             ANSWERS '1-4' FROM FILE HCAPLUS  
             ANSWERS '5-6' FROM FILE CASREACT  
             ANSWER '7' FROM FILE WPIX

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SAVE TEMP L82 HUH651INV/A

FILE 'STNGUIDE' ENTERED AT 15:06:32 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX' ENTERED AT 15:07:10 ON 24 OCT 2008  
D IBIB ED ABS HITIND HITSTR 1-4

FILE 'STNGUIDE' ENTERED AT 15:07:12 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX' ENTERED AT 15:07:38 ON 24 OCT 2008

FILE 'STNGUIDE' ENTERED AT 15:07:44 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX' ENTERED AT 15:07:53 ON 24 OCT 2008  
D IBIB AB HIT 5-6

FILE 'STNGUIDE' ENTERED AT 15:07:58 ON 24 OCT 2008

FILE 'HCAPLUS, CASREACT, WPIX' ENTERED AT 15:08:18 ON 24 OCT 2008  
D IALL ABEQ TECH ABEX 7

FILE 'STNGUIDE' ENTERED AT 15:08:21 ON 24 OCT 2008

FILE 'STNGUIDE' ENTERED AT 15:08:27 ON 24 OCT 2008

FILE HOME

FILE STNGUIDE  
FILE CONTAINS CURRENT INFORMATION.  
LAST RELOADED: Oct 17, 2008 (20081017/UP).

FILE ZCAPLUS

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FILE COVERS 1907 - 24 Oct 2008 VOL 149 ISS 18  
FILE LAST UPDATED: 23 Oct 2008 (20081023/ED)

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FILE LAST UPDATED: 23 Oct 2008 (20081023/ED)

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FILE WPIX  
FILE LAST UPDATED: 23 OCT 2008 <20081023/UP>  
MOST RECENT UPDATE: 200867 <200867/DW>  
DERWENT WORLD PATENTS INDEX SUBSCRIBER FILE, COVERS 1963 TO DATE  
>>> Now containing more than 1.1 million chemical structures in DCR <<<  
  
>>> IPC Reform backfile reclassifications have been loaded to end of September 2008. No update date (UP) has been created for the reclassified documents, but they can be identified by 20060101/UPIC, and 20061231/UPIC, 20070601/UPIC, 20071001/UPIC, 20071130/UPIC, 20080401/UPIC, 20080701/UPIC and 20081001/UPIC.  
ECLA reclassifications to mid August and US national classification mid September 2008 have also been loaded. Update dates 20080401, 20080701 and 20081001/UPEC and /UPNC have been assigned to these. <<

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FOR DETAILS OF THE PATENTS COVERED IN CURRENT UPDATES, SEE  
<http://scientific.thomsonreuters.com/support/patents/coverage/latestupdate>

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[http://www.stn-international.com/archive/presentations/DWPINaVist2\\_0608.p](http://www.stn-international.com/archive/presentations/DWPINaVist2_0608.p)

>>> HELP for European Patent Classifications see HELP ECLA, HELP ICO <<<

#### FILE REGISTRY

Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 OCT 2008 HIGHEST RN 1064721-02-3  
DICTIONARY FILE UPDATES: 22 OCT 2008 HIGHEST RN 1064721-02-3

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FILE LREGISTRY

LREGISTRY IS A STATIC LEARNING FILE

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FILE CASREACT

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FILE CONTENT:1840 - 18 Oct 2008 VOL 149 ISS 17

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*****
*          CASREACT now has more than 15.3 million reactions      *
*****
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FILE EMA

FILE LAST UPDATED: 15 OCT 2008 <20081015/UP>  
FILE COVERS 1986 TO DATE.

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FILE ANTE

FILE LAST UPDATED: 15 OCT 2008 <20081015/UP>  
FILE COVERS 1981 TO DATE

>>> SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN  
THE BASIC INDEX <<<

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FILE APOLLIT  
FILE LAST UPDATED: 22 DEC 2005 <20051222/UP>  
FILE COVERS 1973 TO 2005

THE APOLLIT FILE IS NO LONGER BEING UPDATED. \*\*\*\*\*  
\*\* USE FILE RAPRA FOR UP-TO-DATE POLYMER INFORMATION \*\*

FILE RAPRA  
FILE LAST UPDATED: 7 OCT 2008 <20081007/UP>  
FILE COVERS 1972 TO DATE

>>> Simultaneous left and right truncation is available in the basic index (/BI), and in the controlled term (/CT), geographical term (/GT), and non-polymer term (/NPT) fields. <<<  
>>> The RAPRA Classification Code is available as a PDF file  
>>> and may be downloaded free-of-charge from:  
>>> [http://www.stn-international.de/stndatabases/details/rapra\\_classcodes](http://www.stn-international.de/stndatabases/details/rapra_classcodes).

FILE INSPEC  
FILE LAST UPDATED: 20 OCT 2008 <20081020/UP>  
FILE COVERS 1898 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN THE ABSTRACT (/AB), BASIC INDEX (/BI) AND TITLE (/TI) FIELDS >>>

FILE COMPENDEX  
FILE LAST UPDATED: 20 OCT 2008 <20081020/UP>  
FILE COVERS 1970 TO DATE.

<<< SIMULTANEOUS LEFT AND RIGHT TRUNCATION AVAILABLE IN THE BASIC INDEX >>>

FILE MEDLINE  
FILE LAST UPDATED: 23 Oct 2008 (20081023/UP). FILE COVERS 1949 TO DATE.

MEDLINE has been updated with the National Library of Medicine's revised 2008 MeSH terms. See HELP RLOAD for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

See HELP RANGE before carrying out any RANGE search.

MEDLINE Accession Numbers (ANs) for records from 1950-1977 have been converted from 8 to 10 digits. Searches using an 8 or 10 digit AN will retrieve the same record. The 10-digit ANs can be expanded, searched, and displayed in all records from 1949 to the present.

FILE BIOSIS  
FILE COVERS 1926 TO DATE.  
CAS REGISTRY NUMBERS AND CHEMICAL NAMES (CNS) PRESENT FROM JANUARY 1926 TO DATE.

RECORDS LAST ADDED: 22 October 2008 (20081022/ED)

BIOSIS has been augmented with 1.8 million archival records from 1926 through 1968. These records have been re-indexed to match current

BIOSIS indexing.

FILE EMBASE  
FILE COVERS 1974 TO 23 Oct 2008 (20081023/ED)

EMBASE was reloaded on March 30, 2008.

EMBASE is now updated daily. SDI frequency remains weekly (default) and biweekly.

This file contains CAS Registry Numbers for easy and accurate substance identification.

Beginning January 2008, Elsevier will no longer provide EMTREE codes as part of the EMTREE thesaurus in EMBASE. Please update your current-awareness alerts (SDIs) if they contain EMTREE codes.

For further assistance, please contact your local helpdesk.

FILE PASCAL  
FILE LAST UPDATED: 20 OCT 2008 <20081020/UP>  
FILE COVERS 1977 TO DATE.

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FILE SCISEARCH

FILE COVERS 1974 TO 23 Oct 2008 (20081023/ED)

SCISEARCH has been reloaded, see HELP RLOAD for details.

FILE CONFSCI  
FILE COVERS 1973 TO 15 Oct 2008 (20081015/ED)

CSA has resumed updates, see NEWS FILE

FILE DISSABS  
FILE COVERS 1861 TO 25 SEP 2008 (20080925/ED)

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FILE RDISCLOSURE  
FILE LAST UPDATED: 13 OCT 2008 <20081013/UP>  
FILE COVERS 1960 TO DATE

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BASIC INDEX (/BI) AND TITLE (/TI) FIELDS <<<

>>> IMAGES ARE AVAILABLE ONLINE AND FOR EMAIL-PRINTS <<<

FILE JAPIO

10/599,651

FILE LAST UPDATED: 24 OCT 2008 <20081024/UP>  
MOST RECENT PUBLICATION DATE: 26 JUN 2008 <20080626/PD>

>>> GRAPHIC IMAGES AVAILABLE <<<

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